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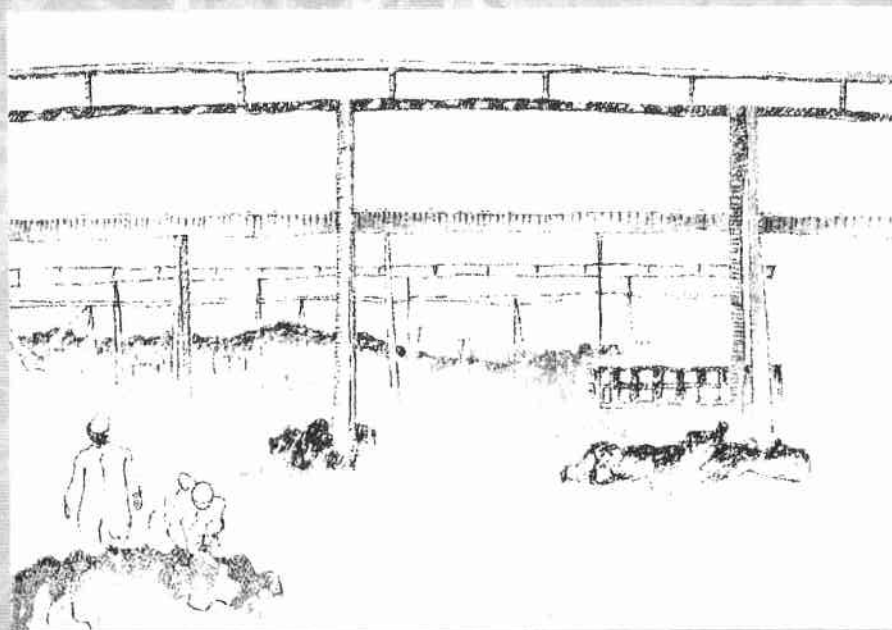
FINAL

Construction Summary Report

Pickling and Plate Yard Removal Action



**Hunters Point Shipyard
San Francisco, California**



VOLUME I of II
TEXT, TABLES, and PLATES
JUNE 18, 1999

**Final Construction Summary Report
Pickling and Plate Yard Removal Action
Hunters Point Shipyard
San Francisco, California**


Volume I of II

Prepared for

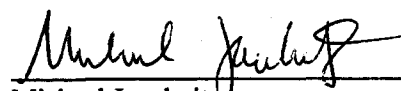
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HLA Project No. 42535 00172



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June 18, 1999



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Pickling and Plate Yard Removal Action
Hunters Point Shipyard
San Francisco, California

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**Final Construction Summary Report
Pickling and Plate Yard Removal Action
Hunters Point Shipyard
San Francisco, California**

HLA Project No. 42535 00172

This document was prepared by Harding Lawson Associates at the direction of PRC Environmental Management, Inc. (PRC), and the United States Department of the Navy (Navy), Engineering Field Activity West (EFA West), Naval Facilities Engineering Command, for the sole use of PRC, the Navy, and oversight regulatory bodies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of the Navy. This report and the interpretations and conclusions contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

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1.0 INTRODUCTION

Harding Lawson Associates (HLA) has prepared this construction summary report (CSR) to document the removal action taken at the Pickling and Plate Yard (PPY), Hunters Point Shipyard (HPS), San Francisco, California (Plate 1). The scope of this removal action encompassed the removal of hazardous substance-containing surface residue from structures, disposal of the residue, and removal and disposal of the structures.

Portions of the site are leased by the U.S. Department of the Navy (Navy) to commercial tenants. The PPY originally consisted of the following:

- Three empty aboveground acid storage tanks (AASTs)
- Three below-grade pickling tanks housed in an open concrete emergency (i.e., secondary) containment vault
- Six plate-drying and two plate-storage rack areas
- Several small buildings
- A large overhead crane assembly.

Before removal action work began, the Navy moved one of the three AASTs to a nearby site at HPS. The Navy also partially dismantled four plate-drying and plate-storage rack areas for stockpiling at the site before removal action work began (HLA, 1991). Following the removal action, the overhead crane assembly and the below-grade emergency containment vault were left in place. Existing underground utilities and monitoring wells also were left in place.

This report was prepared under contract to Tetra Tech Environmental Management, Inc. (Tt), for the Navy, Engineering Field Activity West (EFA West), Naval Facilities Engineering Command, under Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract

N62474-88-D-5086, Subcontract 5086-90-057-004, Contract Task Order 245. Volume I of this CSR contains text, tables, and plates; Volume II contains appendixes. This report incorporates the Navy's responses to EPA and DTSC comments on the draft version of the CSR, dated February 6, 1997 and June 22, 1998. The EPA and DTSC comments, along with the Navy's responses, are included in Appendix A.

Removal actions at the PPY were performed in accordance with the Removal Action for the Pickling and Plate Yard (IR-9), Volume I - Work Plan, herein after referred to as the Work Plan (HLA, 1991).

1.1 Pickling and Plate Yard History - Background

Between 1947 and 1973, the PPY was used for industrial metal finishing and painting. Chemicals used at the site included zinc chromate (ZC) paint primer, sodium dichromate, and sulfuric and phosphoric acids. Steel plates were dipped in the acid tanks (i.e., pickled), dried on racks, and painted with ZC-based, corrosion-resistant primer. ZC paint residues, caused by paint overspray, coated about half the structures in the open rack area. Residues were heaviest in the northwest quadrant of the yard near the pickling tanks and accumulated on Buildings 422 and 423 and the lower portions of the overhead crane assembly. During plating operations, some 15,000 gallons of acid-contaminated rinse water reportedly were discharged to the combined storm and sanitary sewer system each month (WESTEC, 1984). The PPY has not been used since 1973.

1.2 Pickling and Plate Yard Description

1.2.1 Site Layout

The site, about 120,000 square feet (2.75 acres) in area, is at the north end of Hussey Street between Buildings 402 and 411 (Plate 2). When

removal action work began, most of the ground surface between the various structures at PPY was covered by concrete or asphalt. At-grade features included a shallow storm drain system for drainage within the yard and a utility trench containing steamlines in the northern part of the yard. The approximate locations of these features are shown on Plate 2.

Following completion of this removal action, only the large overhead crane assembly, at-grade utilities, and the secondary emergency containment vault with an added roof and security fence remained in place. (See Section 5.0 for more detail.)

1.2.2 Previously Identified Site Contamination

The PPY was investigated five times before the removal action began (HLA, 1992a). In the first investigation, conducted in 1986, liquid in the western pickling tank, sludge from the other two pickling tanks, sludge from the vault, and paint residue were sampled and analyzed for total metal concentrations, including some priority pollutant metals (EMCON, 1987). Significant concentrations of chromium, copper, and lead were detected in the sludge from the pickling tanks and the secondary emergency containment vault. The paint residue sample was reported to contain concentrations of zinc, chromium, and lead above Total Threshold Limit Concentrations (TTLCs). Cadmium and copper were detected in the paint residue apparently originating from dust-overspray that settled in the area when the PPY was operational. Results indicated that the liquid from the pickling tank contained concentrations of chromium above Soluble Threshold Limit Concentrations (STLCs) and detectable levels of several metals that were not above STLCs (EMCON, 1987).

In the second investigation, conducted in 1988, HLA evaluated the structural integrity of the secondary emergency containment vault. From observations made during the evaluation, HLA concluded that the secondary emergency containment vault could adequately contain the

contents of the three pickling tanks should they fail simultaneously (HLA, 1988).

In the third investigation, conducted in June 1989, HLA performed the following activities at the PPY (HLA, 1991; 1992a):

- Sampling of liquid contents of the pickling tanks and the containment vault
- Collecting and analyzing three samples of ZC residue from the drying racks
- Installing one groundwater monitoring well to evaluate the depth to shallow groundwater (HLA, 1992a)
- Collecting and analyzing a wipe sample from the paint residue in the area reportedly sampled in 1986.

The liquids were analyzed for metals, total petroleum hydrocarbons (TPH), and pH. Analytical reports showed that the liquid in each of three pickling tanks was very acidic and contained concentrations of chromium and selenium above federal toxicity characteristic concentrations. The eastern pickling tank also was reported to have concentrations of copper above the STLCs. However, secondary containment vault liquid would not be classified as a hazardous waste when disposed based on the analytical results.

Solid ZC residue samples were analyzed for semivolatile organic compounds (SOCs; EPA Method 8270) and metals. Each of the three samples contained total chromium, lead, and zinc at concentrations above TTLCs. One residue sample also contained barium and copper at concentrations above TTLCs. The organic constituents reported in the ZC residue were primarily phthalates, phenols, and polynuclear aromatic hydrocarbons (PAHs) such as naphthalene and phenanthrene. The presence of these organic constituents may be attributable to the semivolatile solvent matrix of the ZC paint mixture, although this conclusion was not confirmed.

The wipe sample was analyzed for metals. Analytical results for the wipe sample were

negative and suggest that the paint spot wiped was a spill from routine maintenance and not zinc chromate residue (*HLA, 1991*).

On September 21, 1989, following up on the third investigation, HLA measured the fluid levels and pH in the shallow groundwater monitoring well, secondary emergency containment vault, and the pickling tanks to assess whether the secondary emergency containment vault was leaking. The fluid levels and pH data indicated that the vault was not leaking (*HLA, 1992a*).

In the fourth investigation conducted between 1988 and 1991, HLA performed a Remedial Investigation (RI) at OU II Site IR-9 of which PPY is a part (*HLA, 1992a*). The investigation consisted of completing 39 soil borings and installing 11 monitoring wells. The primary contaminant observed in the soil and groundwater was hexavalent chromium.

In the fifth investigation, conducted in 1994, HLA performed additional characterization to fill data gaps identified during review of the RI data. The scope of work was described in the Draft Final Parcel D Site Inspection Report (*HLA, 1994*). In 1994, six HydroPunch borings and one monitoring well were completed to evaluate the lateral extent of hexavalent chromium in soil and groundwater. Results of this phase of investigation are presented in the Parcel D RI Draft Final Report (*PRC, 1996*).

2.0 PROJECT ORGANIZATION

The PPY removal action was a coordinated effort among the U.S. Navy (the project owner), PRC Environmental Management, Inc. (PRC) (the engineering contractor), and Navy Public Works Center (the removal action contractor). Plate 3 shows the reporting relationships among the organizations and primary personnel associated with the PPY removal action. The U.S. Navy provided funding and was primarily responsible for interaction with regulatory agencies, including the U.S. Environmental Protection Agency (EPA) and the Cal/EPA Department of Toxic Substances Control (DTSC). EFA West contracted the engineering activities to PRC. Under contract to PRC, HLA provided field monitoring, observation, and engineering services during the removal action work. EFA West contracted the removal action to Navy Public Works Center, San Francisco Bay (PWCSFB). PWCSFB used the following subcontractors:

- Defense Reutilization and Marketing Office (DRMO), Alameda Facility, Alameda, California - Liquid waste removal
- J.A. Jones Management Services, Inc. (J.A. Jones), Oakland Army Base, Oakland, California - Facility operations services
- Hydro-chem Services, Inc., of HPS - Transportation of hazardous waste from the site
- Erickson Enterprises (Erickson), Richmond, California - Cylindrical aboveground acid tank removal, cleaning, and disposal.

J.A. Jones subcontracted demolition and disposal of the three pickling tanks and decontamination of the containment vault to Zaccor Corporation (Zaccor), Menlo Park, California. Before the removal action began, EFA West had contracted for all of the metal at the site to be disposed by Alco Iron and Metal, Inc. (Alco), of HPS. Alco was accordingly allowed to salvage it. Sequoia Analytical, Redwood City, California, provided waste characterization analysis for PWCSFB. Chester Labnet, Tigard, Oregon, and Air Toxics, Ltd., Folsom, California, analyzed ambient air monitoring samples for total suspended particulates (TSP) and SOCs, respectively, under separate subcontracts with HLA.

3.0 OVERVIEW OF REMOVAL ACTION

This overview lists the implemented PPY removal action activities:

- Demolition of, removal, and disposal as hazardous waste of the concrete foundations (pads) in the plate-storage and drying-rack areas
- Accumulation and disposal as hazardous waste of the ZC residue and other waste generated during the removal activities
- Removal of loosely adhering ZC residue from the steel racks in the plate-storage and drying-rack areas by high-pressure washing with water within a temporary containment structure at the PPY
- Salvage of the steel racks after decontamination
- Removal and disposal as nonhazardous waste of the secondary containment vault liquid
- Removal and disposal as hazardous waste of the secondary containment vault sludge
- Removal and disposal as hazardous waste of the contents of the pickling tanks, including the liquid, sludge, and brick lining
- Removal of asbestos-containing material (ACM) from Buildings 422 and 423 and the secondary containment vault followed by disposal of the ACM as hazardous waste
- Removal, decontamination, and salvage of the three empty steel pickling tanks and the two AASTs
- Demolition, removal, and disposal as hazardous waste of Building 422
- Removal, decontamination, and salvage of the steel frame of Building 423

- Disposal as hazardous waste of work-related wastes (e.g., personal protective equipment) accumulated or generated inside the exclusion zone (EZ) during the removal activities
- Removal and disposal of existing vegetation, soil, and extraneous debris as hazardous waste
- Disposal of rinse water generated during the decontamination of the pickling tanks and vault as nonhazardous waste

In addition to the above, the following activities were performed during the removal action:

- Collection of water from rain and removal activities, followed by sampling, obtaining discharge permits, and discharge of the water to the sanitary sewer system
- Screening soils in areas exposed by demolition work, followed by hot asphalt patching of these areas

Air monitoring at the site perimeter before and during the removal action activities.

The Work Plan (*HLA, 1991*) was modified by field variances during the course of this project. Field variances proposed alternate methods for performing removal activities. The field variances were sent to the affected regulatory agencies for review and comments. After all comments were addressed to the satisfaction of the agencies, the field variances were considered approved for field implementation. Field Variances 1 through 7 are included in Appendix B along with agency comments and Navy responses on the FV.

4.0 REMOVAL AND DISPOSAL ACTIVITIES

PWCSFB began mobilization and site preparation in mid-November 1994. Removal action field activities were completed on March 7, 1996, when the last bin of soil was transported offsite. The actual project schedule is shown on Plate 4.

From December 19, 1994 to December 29, 1995, HLA visited the site on scheduled work days, unless PWCSFB indicated that no work requiring oversight would take place. Removal activities began with grubbing and clearing on PPY December 27, 1994. PWCSFB scheduled every other Friday off. HLA relied on PWCSFB to identify when work would take place outside of the scheduled work week (i.e., "off" Fridays and weekends). HLA recorded activities in a daily log on each day oversight was provided. After January 2, 1996, HLA visited the site approximately once every 2 weeks and whenever PWCSFB informed HLA of activities at the site that required oversight.

The weekly activity summary reports, prepared by HLA's project staff, provide details of the sequence of events and activities at the site between December 19, 1994, and March 7, 1996. The reports are based on HLA's field observations and information from PWCSFB's site supervisors. Appendix C contains copies of the weekly reports. Appendix D contains a photo summary of the project showing the various phases of the removal and disposal activities. Appendix E contains waste shipment records generated and maintained as described in Section 4.5.1.3.

Waste characterization and assessment were conducted in conjunction with removal and disposal activities throughout the course of this project. Appendix F contains the laboratory analytical reports prepared during the removal action.

Appendix G contains information and analytical reports associated with direct discharge of water from the site to San Francisco's sanitary sewer.

Health and safety records and Occupational Safety and Health Administration (OSHA) "Injury-Illness" records were maintained at the site during the removal action. PWCSFB's site health and safety officer checked and maintained the health and safety certification records of PWCSFB and subcontractor personnel who entered the EZ at PPY. HLA maintained records for its personnel who entered the EZ at PPY.

4.1 Mobilization and Setup

Prior to mobilization, PWCSFB obtained permission from the HPS Caretaker's Site Office to use Buildings 420 and 421 on the east edge of the yard as secured shops and storerooms. Site preparations were completed by December 27, 1994. Preparations included the following activities:

- Establishing a support zone (SZ), contamination reduction zone (CRZ), and EZ (Plate 5)
- Mobilizing two trailer-offices to the SZ and a decontamination trailer to the CRZ
- Constructing a bermed area inside the SZ to provide secondary containment for tanks containing rinsewater and dust suppression water
- Connecting PVC pipes around the perimeter of the site to supply water for use in dust control and decontamination
- Lining stormwater drainage manholes with PVC pipes and plugging them with concrete
- Running electric lines along the crane assembly to provide power outlets inside the EZ.

PWCSFB initially mobilized three 20,000-gallon above ground storage tanks. Two of these three tanks were to be used for storing rinsate, dust control water, and rain water. The

third tank was to be used as an emergency storage tank.

HLA installed a weather station and four ambient air monitoring stations during the late stages of mobilization and setup. During this time, HLA established air monitoring procedures and controls and assisted PWCSFB in designing a rainwater runoff control berm (see Sections 4.2 and 4.3).

4.2 Ambient Air Monitoring and Control

Ambient air monitoring was conducted at the perimeter of the site during the removal activities to monitor offsite transport of particulates and contaminants of concern, to verify that airborne concentrations were below action levels. The monitoring results also were used to evaluate the effectiveness of the engineered control methods. Samples collected during removal activities were analyzed for metals and SOCs. Air filters from high-volume samplers were analyzed for TSP/metals, and polyurethane foam (PUF/XAD-2 resin) cartridges were analyzed for SOCs. In addition to conducting ambient air monitoring, PWCSFB conducted personal air monitoring for workers during March 1995.

Meteorological data were collected concurrently with ambient air monitoring data to improve interpretations of the monitoring data during removal activities. A Climatronics Corporation monitoring system was utilized to collect wind speed, wind direction, temperature, and relative humidity data.

4.2.1 Layout of Ambient Air Monitoring Stations

Sample station locations were selected on the basis of regional and site-specific meteorological data presented in previous reports (HLA, 1992b) and on observations made during site reconnaissance, taking into consideration station security and potential air flow obstructions. One station was placed upwind inside the SZ, and three stations were placed downwind along the eastern boundary of the EZ. The final locations

of the air samplers and the weather station are shown on Plate 5.

4.2.2 Action Levels

Action levels for this project were established using the original risk assessment report, prepared by AquaTerra Technologies (ATT), and the report's subsequent revisions (ATT, 1990, 1991a, 1991b). The original risk assessment considered the potential for chronic carcinogenic and noncarcinogenic effects associated with dermal contact and inhalation of site contaminants during the removal action. The action levels presented by ATT were further reviewed and revised by HLA's risk assessment staff during the project to reflect regulatory agency comments on ATT's risk assessment document (ATT, 1991b) and changes in project duration from 13 weeks to approximately 1 year. The revised action levels were used as a screening tool for determining whether an evaluation of associated field activities was needed and whether there was a need to modify the engineered controls used to reduce dust levels during removal activities. The action levels used for this project are presented in Table 1.

4.2.3 Background Ambient Air Monitoring

Background air monitoring was performed at one upwind and one downwind station for 4 days between September 16 and 21, 1994, before removal activities began, to establish ambient background levels of airborne contaminants of concern. Background data for both TSP/metals and SOCs are summarized in Tables 2 and 3, respectively. The data showed that the mean background concentrations of airborne contaminants were below the action levels for potential noncarcinogenic and carcinogenic risks.

4.2.4 Air Monitoring During Removal Activities

Ambient air monitoring for TSP/metals and SOCs was conducted from December 29, 1994, through October 27, 1995. Initially, both the

high-volume and the polyurethane foam samplers were operated for 24 hours. On May 4, 1995, the duration of sampling time was changed from 24 hours to only the hours of site removal activities. The change in sampling times was made to minimize the complicating effect of diurnal wind shifts and to improve the ability to distinguish any site-related impacts.

Sampling for SOC's was eliminated on October 30, 1995 because air monitoring analytical data collected between December 1994 to June 1995 indicated that PAH's were not detected at significant concentrations to be of concern (Field Variance 05, Appendix B). Air sampling with TSP samplers was continued from October 30 to December 14, 1995, during periods of demolition activities at the site. The body of ambient air data collected through December 14, 1995, indicated that activities that were to take place thereafter would not require air monitoring; therefore, no air monitoring was conducted after December 14, 1995.

The air filters were analyzed for TSP using Federal Reference Method RFP-1287-063. Approximately 25 percent of the samples collected during the removal activities (those with the highest TSP readings from each 2-day batch of samples submitted to the laboratory) were analyzed for the following metals.

<u>Analyte</u>	<u>Test Method</u>
Arsenic	EPA 7060
Barium	EPA 6010
Cadmium	EPA 7131
Hexavalent Chromium	EPA 7196
Lead	EPA 7421
Nickel	EPA 249.2
Zinc	EPA 6010

These samples also were analyzed for SOC's using EPA Method 8270. The meteorological data collected simultaneously with the ambient air monitoring data also were evaluated to assess whether site activities may have contributed to the monitored concentrations.

4.2.5 Results

The results of total particulate and metal air monitoring during the removal activities at the PPY from December 29, 1994, to December 14, 1995, are presented in Table 4. The SOC monitoring results are presented in Table 5.

For the days of monitored data selected for analysis, concentrations exceeded the revised action levels on only 1 day. On October 26, 1995, an airborne lead concentration of $2.67 \mu\text{g}/\text{m}^3$ was measured at Station 1 in the SZ along the western side of the site. This value slightly exceeds the lead action level of $2.15 \mu\text{g}/\text{m}^3$ (Table 1). No predominant wind direction could be discerned during the sampling period. An exceedance was not measured at Station 2, the other station for which samples were analyzed on October 26. Review of the field logs, demolition activities sketches, and weekly activity summary report for the period in question (October 23 to 26, 1995) indicated that the field activities were conducted under proper dust suppression procedures and that no extraordinary activities were being performed on that day to cause an elevated lead concentration. The elevated concentration at Station 1 may have been the result of unidentified offsite activities or site activities related to the removal action.

The overall air monitoring results indicated that the dust suppression methods and other engineered controls used during the removal activities were effective in minimizing airborne particulates and contaminants.

4.3 Runoff Control

Because runoff from the EZ could have carried contaminants of concern, it was necessary to contain water from rainstorm events and removal activities. Several steps were followed to contain rainfall and prevent runoff from the site.

4.3.1 Site Drainage Survey

Visual observation indicated that most of the areas in the EZ would drain toward surface

inlets in the middle of the PPY. In addition, the railroad tracks running generally east-west through the site formed a ridge that split the site into north and south drainage areas. To verify the visual observations, Chemical Design Company (CDC), Richmond, California, was hired to perform a drainage survey and map the site contours to determine drainage patterns. The results of the survey are shown on Plate 6. CDC also calculated the holding capacities of the north and south areas of the site; these quantities are shown on Plate 6.

Plate 6 shows that most of the EZ drains toward existing drains in the middle of the PPY. However, an area along the southern portion of the eastern edge of the EZ drains beyond the EZ.

4.3.2 Containment Berm

To prevent runoff along the outer edges of the southeastern portion of the EZ from draining away from the PPY, a containment berm was constructed using existing and additional berms. The height of a containment berm was estimated based on contours shown on Plate 6. The berm was designed so that water accumulating behind it would not overtop but would drain toward the center of the EZ. The outer segments of the concrete pads in this area served as the berm structure for most of the lengths that needed containment. Drain holes that penetrated the pad segments at ground level were plugged with concrete so the segments served as berms. The additional 8-inch-high concrete berm segments were constructed on February 11 through 14, 1995, to span the remaining portions not covered by the concrete pad segments (Plate 6).

To keep precipitation from entering the surface inlet drains within the drainage boundary prior to and during construction of the berm, PWCSFB lined the stormwater catch basins around the perimeter of the EZ with PVC pipes and plugged the bottoms of the catch basins with concrete. The catch basins acted as sumps to collect accumulating rainwater, rinse water, and/or dust control water. Sump pumps were then used to pump water from the sumps to the 20,000-gallon above ground storage tanks located in the SZ.

4.3.3 Site Holding Capacity

Data from the survey of the north and south areas of the site were used in estimating the holding capacity and the number of additional tanks needed to contain water from heavy storm events. The basis for the estimate was a 25-year, 24-hour storm event that produced 3.4 inches of precipitation. It was estimated that two of the three 20,000-gallon storage tanks located inside the bermed area of the SZ were available for storage of rainwater, and that five additional 20,000-gallon storage tanks were necessary to contain the runoff water from a 25-year, 24-hour storm event (See Table 6). The five additional tanks were positioned along the southern edge of the site.

The construction of the berm in the southeast portion of the EZ and the availability of eight water-storage tanks onsite (three in the bermed area of the SZ, plus five along the southern edge of the site) allowed water from both rain and removal activities to be contained.

4.3.4 Discharge of Collected Runoff

Runoff water contained in the 20,000-gallon above ground tanks was sampled and analyzed. The results were provided to the City of San Francisco's publicly owned treatment works (POTW) in support of batch discharge permit applications. Once the permits were approved, water was discharged to the sanitary sewer on Hussey Street. Analytical results are summarized in Table 7 and discussed in Section 4.5.3.2. Appendix G contains copies of the discharge permits and analytical reports.

4.4 Removal Activities

The major removal activities and support actions consisted of the following:

- Removal of plate-storage and drying-rack areas (Section 4.4.1), Buildings 422 and 423 (Sections 4.4.2 and 4.4.3), cylindrical AAST (Section 4.4.4), liquid and sludge from the pickling tanks (Section 4.4.5.1), pickling

tanks (Section 4.4.5.2), and rectangular AAST (Section 4.4.6)

- Collection, segregation, and disposal of metal debris, extraneous waste, vegetation, and soil (Sections 4.4.7 and 4.4.8) throughout the project in support of the major removal activities
- Cleaning of lower portions of the crane assembly (Section 4.4.9)
- Control, collection, and discharge of rainwater and rinse water in conjunction with the removal activities.

PWCSFB and its subcontractor crews performed most of these activities using Level C personal protection equipment (PPE). Level D PPE was used occasionally when dust producing activities were not in progress.

Removal activities are described more fully below.

4.4.1 Plate-Storage and Drying-Rack Area Removal

The removal of the plate storage and drying racks and the demolition of their concrete pads began on January 18, 1995. Initially, a Bobcat loader was used to lift and remove the concrete pads. In the early stages of pad removal, the Bobcat loader was found to be ineffective at lifting. As a result, a pneumatic jackhammer attached to a backhoe loader was used for breaking up the concrete structures and moving debris generated during the removal activity.

Drying rack removal, concrete pad demolition, and stockpiling activities began in the northwestern quadrant of the EZ and proceeded to the southwestern and then the southeastern quadrants. The concrete pads for the drying rack at the northwestern quadrant of the EZ, which had some steel racks mounted on them, were broken up first. The steel drying racks, which spanned two concrete pads, and the wooden spacers bolted to the pads were removed by a combination of manual methods and flame cutting. The bolts and nuts holding the racks to

the pads were cut with either an acetylene torch or by a combination of jackhammering and wrecking with the backhoe. The steel racks were then unmounted from the pads, transferred by forklift, and stored in the south portion of the EZ. Next, the jackhammer was used to break the concrete pads into smaller pieces (blocks) about 4 to 6 feet long. A cutting torch and a hydraulic cutter were used to cut the steel rebar connecting the concrete blocks so they could be separated. Typically a loader was used to pull the blocks from the ground and stockpile them in debris piles.

Between late July and late August 1995, the two storage rack areas in the northwestern quadrant were cleared of vegetation and extraneous debris. The concrete pads were demolished, separated, and stockpiled in the same manner as the drying rack areas.

The concrete debris was segregated and stockpiled inside the EZ for direct disposal according to visual evidence of ZC contamination. The presence of ZC residue was determined visually in the field on the basis of the distinctive yellowish-green paint on the surface of the concrete. Because the color of ZC is readily detected, the segregation of concrete debris as heavily contaminated or lightly to non-visibly contaminated was accomplished in the field.

Removing the racks and demolishing and stockpiling the concrete pads caused portions of the ZC residue to loosen up and fall off. The residue was collected and disposed with the debris as hazardous waste. The wood debris was collected with other contaminated wood and disposed as hazardous waste.

The removal and disposal activities described in Section 4.0 that involved concrete debris, (Sections 4.4.1, 4.4.2, 4.4.3, and 4.5.2.1) were affected by Field Variances 01 and 06 (FV01 and FV06). Originally, the Work Plan called for removal of ZC residue from the concrete structures by physical methods (i.e., hand chipping with subsequent sandblasting). Water and liquid abrasive blasting were approved by the regulatory agencies as alternative residue

removal methods that also reduced the levels of dust generation, as stated in FV01.

On July 30, 1995, PWCSFB conducted an initial blasting demonstration on a visibly contaminated concrete block to evaluate the effectiveness of each of the two wet blasting methods. This demonstration was conducted inside the aboveground zinc chromate control area (ZCCA) structure (Section 4.4.2), which was double-wrapped with 10-mil plastic sheeting to minimize emissions of airborne pollutants to adjacent sites. The demonstration indicated that water blasting was ineffective in removing the ZC residue from the concrete debris. PWCSFB suggested that wet abrasive blasting, using sand as the abrasive media, should also be eliminated in favor of disposing of the concrete as hazardous waste. The benefits of direct disposal are listed below:

- Avoidance of high labor costs associated with wet abrasive blasting
- Avoidance of a long extension in the construction schedule
- Elimination of the additional costs of disposing of spent abrasive media and contaminated water
- Reduction of the potential risk to workers and neighboring tenants from airborne contaminants associated with blasting.

Direct disposal of concrete debris as hazardous waste was approved as FV06.

The removed steel drying and storage racks were decontaminated inside the ZCCA using high-pressure hot-water blasting to remove all soil, loosely adhering ZC residue, and peeling lead-based paint. The separated ZC accumulated either in the lined catch basin or on the asphalt pavement inside the EZ. These ZC chips were collected during the various stages of the project and disposed as Resource Conservation and Recovery Act (RCRA) hazardous waste along with other RCRA hazardous waste solid debris. The blasting water was temporarily stored in the 5,000-gallon rectangular AAST located in the EZ. The

blasting water was later transferred into one of the 20,000-gallon above ground tanks located in the SZ and disposed as discussed in Section 4.5.3.2.

4.4.2 Building 422 Structure Removal

Building 422 was a single-story structure that served as a restroom facility. It was built of cinder block and concrete set on a concrete foundation and contained pipes insulated with asbestos materials. All underground and aboveground utility lines and building services were located, deenergized, and capped prior to building demolition. On March 16, 1995, PWCSFB's asbestos abatement crew removed asbestos insulation from around the exposed piping of the building. The crew wore the same PPE described in the previous section.

The pipe insulation was double-wrapped in 6-mil polyethylene sheeting and placed in the 20-cubic-yard bin. On September 11 and 12, 1995, the building, including its concrete foundation, was demolished using a front-end loader and a backhoe with pneumatic jackhammer attachment. The debris was segregated into concrete piles inside the EZ according to the degree of ZC contamination as described in Section 4.4.1. The debris was later disposed as discussed in Section 4.5.2.1. To suppress dust generation, water was applied during the removal of the asbestos insulation and during the demolition of the building. The site of this structure was patched with asphalt during the final phase of the project.

4.4.3 Building 423 Structure Removal

Building 423 was a single-story steel frame structure that served as a storage facility. The building was set on a concrete foundation and had fiberboard siding panels that contained pressed, nonfriable asbestos. Because the asbestos was nonfriable, there was no need to erect glovebags to accomplish the asbestos removal work. On February 9, 1995, PWCSFB's asbestos abatement crew began unbolting and removing intact siding panels

after spraying the building with water to prevent the generation of dust during the process. The asbestos abatement crew performed this task using Level C PPE, which consisted of a half-face respirator, Tyvek suit, steel-toed boots, and neoprene gloves. By March 15, 1995, all the siding panels were removed, double-wrapped in 6-mil polyethylene sheeting, and placed in the 20-cubic-yard bin containing asbestos insulation from Building 422. Nearly 20 cubic yards of material were removed. Later, the remaining steel structure was unbolted and cut from its foundation, moved intact to the center of the north EZ, and utilized as part of the ZCCA structure. After the work at the ZCCA structure was completed, the steel frame of this building was cut into small pieces using a cutting torch and added to the scrap metal pile in the center of the site. The concrete foundation was demolished using a front-end loader and a pneumatic jackhammer mounted on a backhoe. The concrete debris was stockpiled inside the EZ in segregated piles according to the degree of ZC contamination in the manner described in Section 4.4.1. Later the debris was disposed as discussed in Section 4.5.2.1. The location of this structure was patched with asphalt during the final phase of the project.

4.4.4 Cylindrical Aboveground Acid Storage Tank Removal

Aboveground acid storage tanks at the PPY consisted of a cylindrical aboveground acid storage tank (AAST) and a rectangular AAST. A third AAST was removed to a nearby site prior to the start of removal action work. The cylindrical AAST was empty except for an unknown liquid approximately 2 inches deep in the bottom of the tank. The rectangular AAST was empty.

The liquid in the cylindrical AAST was probably accumulated rainwater that entered through the tank's open hatch and mixed with the residue at the bottom of the tank to form a viscous liquid. The liquid was sampled, and found to contain cadmium above the Soluble threshold Level Concentration (STLC). The liquid was sampled,

analyzed, and disposed with the empty tank, as discussed in Section 4.5.2.5.

The steel platform, tank caging, and tank bracing were removed using flame cutting. Removed pieces were placed in the scrap metal stockpile. The tank's anchors also were cut by torch. On September 6, 1995, a front-end loader was used to slide the tank off its base so the concrete foundation could be broken up and removed. Concrete debris generated was segregated and stockpiled with other concrete debris in the manner described in Section 4.4.1. Later the debris was disposed as discussed in Section 4.5.2.1. On November 30, 1995, Erickson transported the tank and the liquid contents to its facility for decontamination/salvage and disposal, respectively, as described in Section 4.5.2.5. The tank footprint was patched with asphalt during the final phase of the project.

4.4.5 Pickling Tanks

The three below-grade brick-lined steel pickling tanks were housed inside a secondary containment vault. Water that had accumulated in the secondary containment vault was sampled, analyzed, and pumped out before pickling tank removal activities began as described in Section 4.5.2.7. Pickling tank removal activities included removal of the liquid contents of the tanks, the brick lining on the inside walls of the tanks, and the steel tanks themselves.

4.4.5.1 Liquid and Sludge Removal

Pickling tank liquid contents were removed and disposed in one phase of work, as described in Section 4.5.2.6. The sludge at the bottom of the pickling tanks was removed during the pickling tank removal phase, as discussed in Section 4.4.5.2.

4.4.5.2 Removal of the Pickling Tanks

J.A. Jones, PWCSFB's subcontractor, was assigned the task of removing and disposing the brick-lined pickling tank, the sludge at the

bottom of the three tanks, and the sludge at the bottom of the emergency containment vault. J.A. Jones awarded Zaccor the pickling tank removal and disposal subcontract. On November 20, 1995, J.A. Jones and PWCSFB held a preconstruction meeting, which HLA attended at PWCSFB's request. Zaccor fully mobilized to the site on the afternoon of November 20, 1995, and completed the demolition and stockpiling phase of the work on November 30, 1995. On December 15, 1995, Zaccor completed waste removal. The pickling tank removal activities were conducted in the following manner:

- First, Zaccor removed the double layer of bricks lining the interior surfaces of the pickling tanks, along with the asphaltic adhesive that held the bricks to the tank. Removal was accomplished using a combination of multipurpose excavators and a wrecking ball to scrape out and remove the linings and the asphaltic adhesive.
- Some of the piping connecting the pickling tanks to the secondary containment vault was wrapped in asbestos insulation. Asbestos insulated piping was removed during the next phase of work along with piping that held no asbestos insulation. Insulated pipes were doubled-wrapped in polyethylene sheeting.
- Zaccor then cut the steel pickling tanks into manageable pieces for scrap, using a combination of flame cutting and hydraulic shearing by using a shear mounted on an excavator arm. Workers gained access to the containment vault using confined space entry procedures. Fresh air was blown through the emergency containment vault by an air blower. Water was used throughout this process to control dust and to decontaminate pieces of the steel tanks. During tank cutting, the sludge at the bottom of the pickling tanks became mixed with the sludge at the bottom of the emergency containment vault.
- After the tanks were rinsed with water and removed, Zaccor used an excavator bucket,

a Bobcat loader, and manual labor to remove the mixed sludge, bricks, and small leftover pieces of steel from the bottom of the containment vault. Removed sludges, bricks, and asphaltic adhesive waste were stockpiled on and covered by a double layer of 10-mil polyethylene sheeting. The disposal of the wastes generated during this activity is discussed in Section 4.5.2.

- Zaccor decontaminated the interior surfaces of the secondary containment vault as described in Section 4.6.1.

4.4.6 Rectangular Storage Tank Removal

During the removal activities, the 5,000-gallon rectangular AAST was used to temporarily hold rain water (prior to its discharge to the sewer system) and to store rinse water generated during high-pressure water blasting of steel racks. Toward the end of the project, the tank was emptied and the decontamination liquids were stored in Baker tanks and disposed as discussed in Section 4.5.3.2 (Rinse Water). The tank was decontaminated by rinsing with water inside and out to remove any attached dust or dirt prior to its salvage. The rectangular AAST was removed from its foundation after its anchors were flame cut using an oxygen-acetylene torch. The concrete foundation for the AAST was demolished using a jackhammer attached to a backhoe and removed by a front-end loader. The concrete debris was segregated and placed in concrete piles having similar levels of ZC contamination in the manner described in Section 4.4.1. The site of the AAST was patched with asphalt during the final phase of the project.

4.4.7 Metal Debris

Metal debris was present in the EZ before debris was generated from the various structures during the removal activities. The debris consisted mainly of previously dismantled steel racks and assorted scrap metal scattered around the yard, including beams, pipes, plates, rebar, auto parts, and grates. All the existing metal debris was placed in one stockpile, with the exception of the

steel racks, which were washed and stored in a clean staging area established in the SZ upwind of the EZ. The steel racks were decontaminated using high-pressure, hot-water blasting inside the ZCCA. ZC residue loosely adhering to the other scrap metal debris was removed by picking up the metal pieces with an excavator bucket, shaking them in the air, and dropping them to the ground. In addition, the final residue was removed by pressure washing before scrap metal was transported to a recycling facility.

4.4.8 Extraneous Debris, Vegetation, and Soil

The EZ contained extraneous debris (e.g., trash, wooden debris, metal pieces, and glass), vegetation, and soil. The debris, vegetation, and soil were collected, segregated, and stockpiled throughout the course of the project using the following methods:

- Extraneous Debris: Collected by hand and/or forklift, sorted out and segregated by visible evidence of heavy or light ZC contamination, placed on pallets or plastic sheeting, and stockpiled inside the EZ
- Vegetation: Cut to ground surface by a chain saw or pulled from the ground using a forklift
- Soil: Collected from different areas within the EZ using manual and mechanical methods employing shovels, wheelbarrows, backhoes, a Bobcat loader, a forklift, and a front-end loader.

Soil in the EZ came from two main sources: from between the concrete pads and from below grade with the removal of foundations of concrete pads and other structures (e.g., Buildings 422 and 423, and AASTs). The soil collected from the EZ was consolidated and stockpiled in the area from which it was collected (i.e., north or south portion).

Disposal of these materials is described in Sections 4.5.2.2 and 4.5.2.3.

4.4.9 Crane Assembly

The Work Plan recommended that portions of the crane assembly covered by ZC residue be hand chipped and wiped off. The following procedures were used. After the lower crane portions were wet down, visible ZC was removed by hand chipping. The chipped portions were then wiped with a wet rag to remove any residual ZC. Hand chipping was successful in removing ZC overspray from the crane assembly in the southwestern quadrant but was less successful on the crane assembly in the northwestern quadrant. Those portions of the crane assembly where hand chipping was not effective were rinsed off using high water pressure to assure the removal of all ZC that was not tightly adhered. At the end of the project, tightly adhering ZC residue still covered portions of four crane towers in the northwestern quadrant of the site.

The crane rails with tightly adhering ZC residue were screened by EFA West, PRC, HLA, and PWCSFB during the final site walkthrough on March 19, 1996. It was decided that the overhead cranes were safe, nonhazardous, and suitable for salvage, based upon the small amount of tightly adhering ZC relative to the total mass of the overhead crane structure. According to the Navy's metal salvage contractor, Alco Iron and Metal, Inc., the overhead crane structure was dismantled by July 24, 1996. Parts of the crane's support members (i.e., braces) were transported to Schnitzer Steel Mill for offsite recycling, and the beams and columns were salvaged and stored onsite for reuse.

4.5 Waste Disposal

Segregation, characterization, and disposition of the various waste streams generated during the removal activities continued throughout the course of the project. The waste generated during this project consisted of the following:

- Concrete debris from the removal of the pads in the plate storage and drying-rack areas, Building 423 foundation, the two cylindrical AAST and rectangular AAST

foundations, and Building 422 and its foundation

- Steel racks, scrap metal, the steel frame of Building 423, the rectangular AAST, and the pickling tanks
- Cylindrical AAST with viscous liquid residue inside
- Wood, vegetative debris, and trash
- Soil accumulated between and beneath the concrete pads and other structures inside the EZ
- ACM from the piping insulation of Building 422, siding panels from Building 423, and containment vault piping
- Liquid from the containment vault
- Acid from the pickling tanks
- Sludge from the pickling tanks and containment vault
- Brick lining from the pickling tanks
- ZC residue that flaked from the various structures during removal activities
- Rinse water from the decontamination of the secondary containment vault, pickling tanks, rectangular AAST, and the steel racks
- Water used to control dust and to wash down the site
- Spent PPE
- Rainwater collected from the site.

4.5.1 Waste Characterization

To evaluate disposal alternatives, characterization samples were collected of waste streams from the concrete, steel racks, soil, vegetation, cylindrical AAST liquid, pickling tank contents, secondary containment vault contents, rainwater collection tank sediments, rinse water, and rainwater.

4.5.1.1 Waste Profile Sampling

The samples collected from the above waste streams were analyzed using approved analytical methods as will be discussed in Section 4.5.2 and as listed in Tables 7 through 9. Results in Table 7 are limited to rinse water and rainwater waste stream samples. Table 8 summarizes solid waste stream sample results, while Table 9 summarizes liquid waste stream sample results.

4.5.1.2 Waste Stream Assessment

On the basis of analytical results of the various samples, the waste streams were assessed to determine the proper method of disposal according to applicable regulatory limits. Assessments of individual waste streams are discussed in Sections 4.5.2 and 4.5.3. Some waste streams were not sampled or analyzed and were assessed and characterized solely on the basis of visual observations and generator knowledge.

4.5.1.3 Waste Tracking

Hazardous wastes were transported under uniform hazardous waste manifest (DTSC 8022A/EPA 8700-22), and nonhazardous wastes were transported under nonhazardous waste manifest (12-BLS-C5 or approximate equivalent). Most recyclables were transported under bills of lading. A primary file of manifests and bills of lading is maintained by the HPS Caretaker's Site Office. Copies of the manifests and bills of lading were collected by PWCSFB as each truck left the site.

Treatment, storage, and disposal facilities returned signed copies of the uniform hazardous waste manifests and nonhazardous waste manifests to the Caretaker's Site Office to confirm receipt. Copies of manifests and bills of lading are in Appendix E. A disposal summary is in Table 10.

Throughout this text, the term non-RCRA hazardous waste is synonymous with California Hazardous Waste.

4.5.2 Demolition Debris and Waste

Removal of demolition debris and waste from the site began on March 31, 1995. The final load was shipped out on March 7, 1996. This section does not discuss wastes generated during and as a result of construction activities (e.g., PPE and rinse water). These wastes are discussed in Section 4.5.3.

4.5.2.1 Concrete

Concrete debris was generated from the demolition of pads in the drying and storage rack areas, Building 423 foundation, the two cylindrical AAST and rectangular AAST or 3 foundations. Concrete debris was segregated according to visible evidence of ZC contamination. As described in Section 4.4.1, the presence of ZC residue was determined visually in the field on the basis of the distinct yellowish-green paint on the surface of the concrete.

Debris generated from the two heavily contaminated plate-storage rack areas in the northwestern quadrant was stockpiled separately in the northwestern corner of the EZ. Concrete blocks with less adhered ZC residue were piled in several locations around the yard. At least minor amounts of attached ZC overspray and loose chips of ZC were evident in all piles.

Originally, the concrete was to be decontaminated and then tested to evaluate its suitability for disposal as nonhazardous waste. As described in Section 4.4.1, an initial blasting demonstration was conducted on July 30, 1995, to determine the effectiveness and practicality of two decontamination methods. Both high-pressure hot-water blasting and wet abrasive blasting (WAB) were tested, using sand as the blasting medium. High-pressure water blasting did not remove the ZC overspray. WAB took 30 minutes to remove visible ZC contamination from one side of a 3-foot-long, 2-foot-wide, and 2-foot-tall block.

Several samples of concrete were collected and analyzed to characterize the waste stream and

assess the effectiveness of WAB. Concrete samples were collected by PWCSFB on July 24 and August 3, 1995. The results of these two sampling events are in Appendix F. Because sample collection techniques were not documented, the results are not shown in Table 8.

On August 15, 1995, two core samples were collected from a visibly contaminated concrete block and two from a non-visibly contaminated block. Samples were taken between depths of 0 to 3 inches below the surface and 3 to 6 inches below the surface. Extracts from these samples were analyzed for the constituents shown in Table 8. Only barium and chromium were detected in the extracts of the two samples collected from the visibly contaminated block. Chromium concentrations were high in both samples; the extract from the near-surface sample indicated a chromium concentration of 16 mg/L, while the extract from the sample taken from 3 to 6 inches below the surface indicated a concentration of 15 mg/L. Based on available information regarding sample collection technique, cross contamination was suspected in the analytical results for the samples collected from the block with no visible contamination; therefore, the results are not considered representative of the chemical character of the block.

On September 13, 1995, the block cleaned by WAB was sampled in nine locations by a combination of chipping, drilling, and coring. The number of samples and their depths were as follows: three from the surface, three from 1 to 3 inches below the surface, two from 4 to 4.5 inches below the surface, and one from the center of the block. The first eight samples (all but the sample taken from the center of the block) and their extracts were analyzed individually for the constituents indicated in Table 8. In all samples, results on tested analytes in both the solid and the extract were below the RCRA threshold limits contained in California Code of Regulations, Title 22, Sections 66261.21 through 66261.30. Although concrete blocks cleaned by WAB on all sides would probably be characterized as nonhazardous, for reasons of practicality and economy PWCSFB

chose to dispose all concrete debris as hazardous waste without decontaminating it as allowed by FV06.

Concrete debris with heavy surface ZC contamination was disposed as RCRA hazardous waste based on core samples collected on August 15, 1995, from a visibly contaminated concrete block.

Concrete debris that had little ZC overspray or that was free from visible evidence of such contamination was classified using the concrete core sample results collected on September 13, 1995, from the sand-blasted concrete block. As a conservative measure, five loads of blocks with little or no visible contamination were shipped and disposed as non-RCRA (i.e., California) hazardous waste.

Based on the above criteria, from November 6 through 17, 1995, Allwaste Transportation and Remediation, Inc., removed all of the concrete debris from the site for disposal at Laidlaw Environmental's Class I landfill in Buttonwillow, California, in coordination with Laidlaw facility personnel. Soil from the site was used for a protective 1-foot-thick bedding layer in each trailer. Concrete was then loaded into open trailers. Canvas covers were rolled over the waste before the trucks departed. Sixty-four trucks were manifested as carrying RCRA hazardous waste, and five trucks were manifested as carrying non-RCRA hazardous waste (Appendix E). Dirt classified as RCRA hazardous waste (see Section 4.5.2.3) was loaded onto the RCRA trailers for bedding.

The bedding used in the non-RCRA hazardous waste trailers was selected by PWCSFB at the time of loading. Two trailers were bedded with dirt from Dirt Pile 5. Soil from Dirt Pile 5 was characterized as non-RCRA hazardous waste, as described in Section 4.5.2.3. Other concrete debris loaded into the non-RCRA hazardous waste trailers (i.e., three loads) came from concrete piles with the least amount of visible ZC and from Dirt Pile 6 for bedding. Soil from Dirt Pile 6 was characterized as RCRA hazardous waste, as described in Section 4.5.2.3.

4.5.2.2 Steel Racks and Scrap Metal

Pieces of steel racks and scrap metal were generated during removal activities or were already at the site as described in Section 4.4.7. These racks and scrap were to be decontaminated and salvaged as proposed in the Work Plan. Large steel racks had to be cut down, using a cutting torch, into sections that could be handled by a small forklift. All other scrap metal was piled in the center of the yard. A variety of materials was placed in the pile: fragments of racks, aboveground pickling tank pipes, an 1/8-inch-thick steel plate (roughly 12 feet tall and 35 feet long), and abandoned metal scrap scattered around the EZ, including auto parts, metal grates from the various tanks, and other assorted pieces of abandoned junk. Some of the scrap and approximately 10 percent of the racks had loosely adhered ZC residue on portions of their surfaces. Some of the racks also had peeling lead-based paint. Because the cut-down steel racks and metal scrap were to be shipped to a smelting facility where any remaining and tightly adhering surface contamination would be incorporated into recycled material, ZC that would not come off the metal during handling and transportation was allowed to remain. HLA recommended visual screening procedures to double-check that all loose surface contamination was removed from the metal prior to its removal from the site.

The steel racks were hand chipped and then pressure washed in the ZCCA. Once washed, the racks were stored in a cleaned staging area upwind of the EZ for screening and removal. This method of cleaning effectively removed the flaky paint and primer. The racks were cleaned until only tightly adhered ZC residue, primer, and lead-based paint remained.

Wipe samples from the pressure-washed racks were collected on August 29 and September 12, 1995. Ten samples were collected on August 29, 1995. The samples were taken randomly from the group of racks that had been pressure washed at the time of sampling, approximately 30 percent of the total number of racks. Racks with loosely adhered ZC residue had not yet

gone through the cleaning process. The two samples taken on September 12, 1995, specifically targeted spots on washed racks where paint and primer were still present. Samples taken on both dates were analyzed for chromium, lead, and zinc, as shown in Table 8. The highest values were 410 micrograms (μg) of chromium per wipe from the samples collected on August 29, 1995, and 210 μg of chromium per wipe from samples collected on September 12, 1995. The nearest value to these among all 12 samples was 33 μg of chromium per wipe.

The HLA site engineer's assessment was that the remaining tightly adhered ZC paint and/or primary coating constituted a very insignificant amount compared to the total mass of the metal, well below the threshold of hazardous waste. Therefore, the steel racks and scrap metal pieces were handled as normal steel scrap by the smelter.

Before the start of this removal action, the steel racks and scrap metal at the site already had been contracted by PWCSFB to Alco for disposal. After all racks were screened and found to be free of loose and flaking paint and ZC residue, they were released to Alco for pickup. On November 27 and 28, 1995, Alco inspected the racks and accepted them with the tightly adhered coatings. The racks were then loaded onto 15 flatbed trailers. The bills of lading and signed acceptance sheet (Appendix E) indicate that nearly 300,000 pounds of steel racks were removed and delivered by Alco to Circosta Iron and Metal Company (Circosta), San Francisco, California, a scrap metal transfer facility.

On December 1, each piece of metal in the scrap metal pile was picked up by an excavator, shaken vigorously, and dropped to the ground to knock off loosely adhered ZC residue. On December 8, 1995, PWCSFB pressure washed the metal, and Alco loaded the scrap metal into four trucks. A representative of PWCSFB certified that the scrap metal passed visual screening criteria. Bills of lading indicate that 124,220 pounds of scrap metal were shipped to Circosta (Appendix E).

4.5.2.3 General Debris and Vegetation

The general debris and vegetation removal process described in Section 4.4.8 resulted in several segregated piles of wooden construction debris, vegetative debris, and soil. To properly dispose of the piles, PWCSFB used limited sampling, generator knowledge, and reliance on waste disposal facilities to characterize materials proposed for disposal. The summary of sample analyses is presented in Table 8. The laboratory analytical reports are in Appendix F.

Wooden Construction and Vegetative Debris Piles

The wooden construction debris generated during the removal activities and the extraneous wooden waste existing on the site were loaded directly into dump trucks and disposed on August 7, 1995, as RCRA hazardous waste. The vegetative debris was loaded into bins that were placed on trailers and disposed as RCRA hazardous waste on November 6 and 7, 1995. Both the wooden debris and vegetative wastes were disposed at Laidlaw Environmental's Class I Landfill in Buttonwillow, California.

Soil Piles

Six soil piles were generated from the northern and southern portions of the EZ during the removal activities. Dirt Piles 1, 2, 3, and 5 were generated from the northeastern quadrant and the eastern concrete pads of the northwestern quadrant. Dirt Piles 4 and 6 were generated from the southwestern and southeastern quadrants. PWCSFB sampled and analyzed the soil piles to characterize the soil and evaluate methods of disposal.

At least one soil sample from Dirt Piles 1, 2, and 6 exceeded the California TTCs for chromium (2,500 mg/kg), lead (1,000 mg/kg), and/or zinc (5,000 mg/kg). Analytical results from Dirt Pile 4 indicated that concentrations of chromium exceeded the federal maximum concentration for the toxicity characteristic of 5 mg/L in two of the eight soil samples taken from that pile.

Soil extracts (generated from the TCLP) from Dirt Piles 3 and 5 contained concentrations below federal maximum concentrations for the toxicity characteristic.

Testing and analysis of the accumulated soil piles by TTLC and/or TCLP were conducted mainly to establish the basis for soil segregation into RCRA and non-RCRA hazardous waste. All soil originating from the PPY was disposed at Class I landfills. Characterization of the segregated piles is described below.

Dirt Pile 1 was characterized as a potentially RCRA hazardous waste because of its high chromium, lead, and zinc content. Due to a communication error, however, one bin containing material from Dirt Pile 1 was transported as non-RCRA hazardous waste on March 31, 1995, to Laidlaw Environmental's Class I landfill. The remainder of Dirt Pile 1 was disposed with Dirt Pile 2, totaling one 15 cy bin, as RCRA hazardous waste on June 20, 1995. Dirt Pile 3 was disposed in three bins (15 cy each) as RCRA hazardous waste between July 19 and August 7, 1995.

Dirt Pile 4 was used as bedding for concrete debris disposed as RCRA hazardous waste. On August 17, 1995, soil mixed with concrete from the northwestern quadrant was loaded into six dump trucks and removed as RCRA hazardous waste to Laidlaw's Class I landfill in Buttonwillow, California.

The analytical results for soil samples collected from Dirt Pile 5 indicated that concentrations did not exceed the federal maximum concentrations for toxicity characteristics; therefore, material from Dirt Pile 5 was used as bedding material for concrete debris disposed as non-RCRA hazardous waste to Laidlaw's Class I landfill in Buttonwillow, California.

On the basis of TTLC analysis, Dirt Pile 6 was managed as potentially RCRA hazardous waste and used mostly as bedding material during the disposal of 61 loads of RCRA hazardous waste debris. A small portion of this pile (less than 2 cy), however, was used as a thin layer of bedding material in three loads of concrete debris that were manifested as non-RCRA

hazardous waste, and disposed of at Laidlaw's Class I landfill in Buttonwillow, California.

Three soil-filled bins sampled on January 10, 1996, and removed on February 8 and March 7, 1996, came from the final surface cleaning pile as described in 4.5.3.2. The analytical results of the extract by the TCLP method indicated that none of the federal maximum concentrations for the toxicity characteristics was exceeded; therefore, these bins were disposed as non-RCRA hazardous wastes at ECDC Landfill in East Carbon, Utah.

4.5.2.4 Asbestos

On March 31, 1995, the asbestos insulation on piping and fiberboard siding panels that were removed from Buildings 422 and 423, respectively, as discussed in Section 4.4, were disposed. Allwaste Transportation and Remediation, Inc., transported this material in one load to California Asbestos Monofil, Copperopolis, California. Asbestos once associated with the pickling tanks and subsequently disposed is discussed in Section 4.5.2.6.

4.5.2.5 Tanks (Cylindrical AAST, Pickling, and Rectangular AAST)

Removal and disposal of the contents of the various tanks are discussed below.

Cylindrical AAST

The cylindrical, 25,000-gallon steel AAST was disconnected and decontaminated as discussed in Section 4.4.4. The decontamination process treated the external surface of the tank only. A small amount of viscous liquid residual was found in the tank. On July 24, 1995, one sample of the liquid was collected and analyzed for California Code of Regulations (CCR) Title 22 regulated metals.

Analytical results for the cylindrical AAST residual, summarized in Table 9, indicated that none of the TTLC/STLC values for metals was exceeded, with the exception of cadmium. The

AAST, with its contents of less than 2 inches of unpumpable viscous liquid, was manifested as an "empty container" according to Title 22 CCR, Section 66261.7(b)(1), and therefore was not subject to management as hazardous waste. On November 30, 1995, the cylindrical AAST, with residual liquid inside, was lifted onto a flatbed by two large forklifts. Oversized load permits were obtained, and on December 1, 1995, Trident Truckline, Inc., transported the cylindrical AAST and contents under uniform hazardous waste manifest as "Non-RCRA Hazardous Waste Solid". The receiving facility, Erickson in Richmond, California, is permitted by the DTSC to treat empty tanks and containers that contained RCRA and non-RCRA hazardous waste. According to the Erickson facility officials, all residual product and rinse water generated from the cleaning of this tank at the Erickson facility was also managed as hazardous waste as required by Title 22.

Pickling Tanks

During removal of the three pickling tanks from the containment vault, five types of waste were removed, including rinse water, brick and asphaltic adhesive, ACM, sludge, and scrap metal (see Section 4.4.5). Before other removal activities began, the piping asbestos insulation was removed, double-wrapped, taped, and transported to B&J Sanitary Landfill in Vacaville, California, on December 15, 1995, by Stening Environmental. Most of the asphaltic adhesive that bonded the bricks to the steel tanks remained attached to the bricks. The bricks and the sludges of both the pickling tanks and containment vault became a mixed waste stream. The containment vault sludge was sampled on October 10, 1995, and analyzed for CCR Title 22 inorganic toxic substances. The analytical results indicated that the TTLC values for toxicity characteristics were not exceeded. The pickling tank sludge and containment vault sludge constituted an estimated 1.5 cy and 0.5 cy of dry solids, respectively, of the 234 cy of mostly brick debris. On December 11, 1995, Zaccor collected and submitted one sample of the mixed waste (both sludges and bricks) for lead analysis using TCLP. No lead was detected in the sample extract. The combined pickling

tank sludge and bricks and containment vault sludge were managed as non-RCRA hazardous waste, on the basis of the composite sample collected from the generated debris and the total volume of the debris versus the volume of the sludge. On December 15, 1995, the waste was disposed at Laidlaw Environmental's Class I landfill in Buttonwillow, California.

During removal of the pickling tanks from the containment vault, some steel tank pieces became mixed with the mixed waste stream. The steel was picked back out of the mixed waste stream, decontaminated, and returned to the scrap steel waste stream. Between November 24 and December 1, 1995, Zaccor salvaged all scrap steel associated with the pickling tanks, including some piping, and transported it to Schnitzer Steel Mill, Oakland, California. Bills of lading on this steel were not used by PWCSFB and hence none is provided in this report. Several loads were taken to the mill in a high-walled, open-top semi-trailer.

On April 13, 1995, the liquid in each pickling tank was sampled. Four samples were taken from near mid-depth of each tank at evenly spaced horizontal intervals and composited. The composites were analyzed for the toxicity characteristics for both California and federally regulated metals. The composites from the eastern, center, and western tanks, respectively, were analyzed for total extractable hydrocarbons (EPA Method 8015 modified), polychlorinated biphenyls (EPA Method 8080), and SOC's (EPA Method 8270). No analytes were detected in the additional analyses for organics. The results for the metals were significant and appear in Table 9. The hazardous nature of the liquid indicated by previous investigations was confirmed. A TSDF able to accept liquids below pH 2.0 was found. Onsite neutralization discussed in the Work Plan was therefore unnecessary. On June 15 and 16, 1996, five vacuum trucks equipped with acid-resistant pumps removed all of the pickling tank liquid. The 22,500 gallons removed were transported under hazardous waste manifest as RCRA hazardous waste to Eticam in East Fernley, Nevada, for treatment and disposal. DRMO supervised the removal and transportation

conducted by Smith Environmental Technologies Corporation, which hired MP Environmental Services to haul the liquid to the Nevada TSDF.

The sludge in two of the pickling tanks was sampled and analyzed by EMCON (EMCON, 1987). Corrosivity results and chromium concentrations indicated that the sludge was a RCRA hazardous waste. After the liquid was removed, the sludge in each of the three tanks dried to a thickness of less than 1 inch. The dried sludge was disposed with the containment vault sludge and bricks from the pickling tanks lining as discussed previously.

Rectangular AAST

On December 13, 1995, the rectangular AAST, which was found empty at the start of the removal action, and which was removed as discussed in Section 4.4.6, was hosed off and removed from the site by Alco to be used elsewhere by the Navy within HPS. No bill of lading was issued. The rinse water was pumped into a storage tank and disposed with other decontamination liquids as mentioned in Section 4.5.3.2.

4.5.2.6 Containment Vault Contents

The 16-foot-deep containment vault contained about 6 inches of sludge and was filled with liquid to within approximately 3 feet of the top of the tank at the time of disposal. During previous investigations, the containment vault liquid was found to be nonhazardous. Prior to discharge to the City of San Francisco (City) sanitary sewer system, the liquid was sampled again and analyzed according to City requirements, which are presented in Appendix G. On July 24, 1995, HLA oversaw the sampling of the vault liquid. Samples were collected from set depth intervals in east, central, and west locations. Samples were composited vertically into one sample from each of the three locations. Each composite was analyzed for the following:

- PH

- Flash point
- Total suspended solids
- Cyanide
- Chemical oxygen demand
- Organic lead
- Phenolics
- Sulfides
- Total oil and grease (EPA 5520B modified)
- Total recoverable petroleum hydrocarbons (TRPH; SM 5520 B&F Mod)
- CCR Title 22 metals
- Chlorinated herbicides (EPA 8150)
- SOCs (EPA 8270)
- Volatile organic compounds (VOCs; EPA 8240).

The laboratory analytical report is in Appendix F. Results are summarized in Table 9. All analytes met the City's discharge standards shown in Table 7, except for lead and organic lead. PWCSFB made an attempt at onsite filtration through a 100-micrometer filter. Although analytical results on the filtered containment vault liquid reported in Table 9 indicate that concentrations of lead were below the City's limit, the cost and speed of the filtering process made it infeasible.

Between October 2 and 6, 1995, the vault liquid was pumped into 3,000- and 5,000-gallon vacuum trucks operated by MP Environmental Services under the supervision of DRMO. Vault liquid (114,000 gallons) was shipped under nonhazardous waste manifests to Refineries Services (dba Enviropure West), in Patterson, California.

4.5.3 Other Waste

Disposal of wastes created or collected because of work activity at this site (i.e., not pre-existing waste or material) is discussed in this section.

4.5.3.1 Personal Protective Equipment

All used PPE and decontamination material (e.g., rags, wipes) were placed in polyethylene bags and disposed as hazardous waste. Materials were not analyzed; only generator knowledge was used to select the method of disposal. The first bins of PPE were shipped on June 20, 1995, as a non-RCRA hazardous waste solid to Laidlaw Environmental's Class I landfill in Buttonwillow, California. On October 17, 1995, two more bins of PPE were shipped. This time the waste was shipped with contaminated PVC pipe used at the site. The two bins went to the same landfill as RCRA hazardous waste.

4.5.3.2 General Waste

Disposal of general waste, including rainwater, sediments from collected rainwater, and rinse water, is discussed below.

Rainwater

Rainwater accumulated inside the EZ during rain events that occurred between December 1994 and May 1995. PWCSFB monitored and pumped the rainwater out of the EZ to prevent any runoff to adjacent sites. Rainwater was collected in 20,000-gallon storage (Baker) tanks and sampled according to City and County of San Francisco, Department of Public Works, Bureau of Environmental Regulation and Management (SFDPW/BERM) batch water discharge requirements. Composite samples were collected from the tanks and analyzed as specified in SFDPW's requirements in Appendix G.

Between the months of December 1994 and June 1995, PWCSFB obtained five batch discharge permits from SFDPW/BERM to discharge approximately 260,000 gallons of accumulated rainwater. Rainwater was

subsequently discharged to the two sanitary sewer manholes on Hussey Street. Analytical results are summarized in Table 7. Laboratory data sheets, discharge permits, and letters of approval are in Appendix G.

Sediments from Collected Rainwater

After rainwater was discharged from the 20,000-gallon storage tanks, sediments were left behind. Sediments from Tanks 1, 2, and 3 were sampled and composited on June 13, 1995. Analytical test results are summarized in Table 8. Laboratory analysis data sheets are included in Appendix F. The concentrations of chromium and lead were found to be 840 and 1,700 mg/kg, respectively, indicating that the sediments should be classified as non-RCRA and potentially RCRA hazardous waste. Because of procedural oversight, the sediments were released inadvertently to the SFDPW sanitary sewer system.

Rinse Water

Water used for site dust control and to hose off the site for cleaning was pumped to and stored in Baker tanks or left standing onsite. Collected rinse water and rainwater were discharged during the first 6 months of the project (February to June 1995). After June, the rinse water was evaporated onsite.

Rinse water generated during the high-pressure water blasting of the steel racks was drained into a lined sump, then pumped into the 5,000-gallon rectangular AAST. Later the rinse water was pumped into a Baker tank and disposed with the rinse water generated during the decontamination of the secondary containment vault, rectangular AAST, and pickling tanks. On December 15, 1995, this combined rinse water (1,000 gallons total) was disposed without characterization as a nonhazardous liquid at the McKittrick Waste Treatment Site.

4.6 Secondary Containment Vault

This section discusses vault cleaning, cover construction, investigation of vault integrity, and characterization of the vault.

4.6.1 Cleaning

On November 29, 1995, Zaccor workers used shovels and an excavator to remove the majority of the containment vault sludge. The following day the workers used a pressure washer to clean the surface of the lower 4 feet of the vault. Water from a fire hose was used to rinse the walls and direct the rinse water to a sump near the middle of the west wall. A 1,000-gallon vacuum truck was used to remove all of the rinsate. Rinse water was pumped into a storage tank within the containment berm in the SZ and disposed with other rinsate liquids as stated in Section 4.5.3.2 - Rinse Water.

4.6.2 Cover

The secondary containment vault was left in place. PWCSFB constructed a temporary roof structure over the vault to prevent stormwater for accumulating in it. Steel I-beam supports were placed across the shorter 36-foot span, then two-by-fours and plywood boards were nailed to the I-beams and weatherproofed using asphaltic felt. To allow continued vault access, a 3.5-foot by 2.5-foot hatch was cut in the cover near the middle of the west edge of the roof. Before the roof could be completed, 2 feet of rainwater had accumulated in the vault (20,000 gallons). On January 18, 1996, the rainwater was sampled and analyzed for the constituents in Table 1A in Appendix G as required by SFDPW. Results of key analytes may be found in Table 7, while laboratory data sheets appear in Appendix F. The concentrations of all tested analytes were found to be below discharge standards. On February 15, 1996, after receiving SFDPW approval, the water was discharged to a nearby sanitary sewer manhole. The roof was completed on approximately February 20, 1996.

4.6.3 Investigation of Vault Integrity

Groundwater levels recorded semiannually from February 1992 through November 1995 show that shallow groundwater at PPY has fluctuated between approximately 6.6 and 8.5 feet above the bottom of the vault. On February 15, 1996, the vault was pumped dry. On March 4, 1996, 1 to 3 inches of water was observed standing in the vault. Photographs of the interior of the vault may be found in Appendix D. The interior surface of the vault did not exhibit any visual evidence of cracking, but seven damp strips observed on February 15, 1996, running vertically down the walls of the vault indicate that it is not completely sealed where pipes penetrate vault walls and where microcracks exist.

4.6.4 Characterization

Once the vault was decontaminated, HLA viewed it from the ground surface without entering it and observed no remaining visible contamination other than rust-colored stains on its interior walls and floor. The interior vault surface was not sampled, tested, or characterized during this phase of work at the site.

4.7 Asphalt Pavement Patching

Characterizing the surface soil in and patching unpaved areas within the EZ were not discussed in the Work Plan. The activities became necessary, however, due to the combined effects of ZC removal procedure variances and exposure of unpaved areas created by demolition.

4.7.1 Background

Demolition activity caused the old asphalt pavement in several areas around the EZ to break up to the point of exposing subgrade. When the foundations of Building 422, Building 423, and the AAST were removed, larger areas of subgrade were exposed. In FV06, plans to remove ZC residue were abandoned in favor of directly disposing of

concrete pads and demolished building debris as hazardous waste. As a result of this change, ZC-contaminated piles of debris were stockpiled around the EZ. An unanticipated amount of contaminated dirt deposited on the site during its years of inactivity also were stockpiled around the EZ before being removed. The water used to suppress dust and clean the asphalt surface of dirt and small debris swept ZC chips and contaminated dirt into unpaved areas.

Screening of soil in unpaved areas was performed during this removal action. The scope of work of this removal action did not include subsurface remediation. Any subsurface remediation should be addressed in future phases of work at PPY.

4.7.2 Field Screening

HLA chose hexavalent chromium as a basis for screening because it was the key contaminant of concern at the site associated with the stockpiled debris. To quantitatively evaluate the impact of actions discussed in Section 4.7.1 on exposed subgrade, HLA collected and screened 48 surface soil samples from multiple locations within each unpaved area in the EZ.

Screening was conducted onsite using a HACH® colorimetric field test kit for hexavalent chromium (Catalogue Number 24618-00) with a detection range in soil of 0.5 to 15,000 mg/kg. HACH® company literature explains that the kit uses a concentrated, alkaline extracting reagent and ChromaVer3 color developing reagent. The literature also shows that the extraction method is conservative when compared to deionized water extraction. Deionized water extraction is currently employed by most analytical laboratories when testing for Cr (VI). Sampling and screening activities occurred between December 21, 1995, and January 2, 1996.

Results of screening are shown on Plate 7. The complete set of field data is in Appendix H. Results indicated that soil from four of the unpaved areas may have concentrations of hexavalent chromium in excess of 230 mg/kg, the preliminary remediation goal (PRG) for hexavalent chromium in industrial areas as published by EPA, Region IX (EPA, 1995).

The future subsurface remediation of this site should address this situation.

4.7.3 Preparation and Patching of Exposed Areas

PWCSFB hired J.A. Jones to patch the unpaved areas at PPY. J.A. Jones subcontracted the work to Rios Grading, Inc. (RGI), of San Francisco, California. During January and early February 1996, before RGI mobilized, PWCSFB prepared several areas by removing some of the loose subgrade soil and small debris from demolished foundations. The dirt and debris were placed in three bins and disposed on February 8 and March 7, 1996, as non-RCRA hazardous waste on the basis of the analytical results of the samples collected from this waste, as presented in Table 8. On February 26, 1996, RGI mobilized and began final patching preparations. The soil within a few unpaved areas was flattened out by hand and with the aid of a backhoe. During grade flattening and standing water removal, all laborers used Level C PPE. On February 26, 1996, tack coat was sprayed on the bonding surfaces, and the hot mix asphalt was applied. Asphalt was dispersed by hand and with the aid of a backhoe, then compacted using a small steel wheel roller to a minimum thickness of 2 inches and to a level above the existing asphalt surface. Work continued in a similar manner with pauses for inclement weather. On March 6, 1996, patching operations were completed.

4.8 Demobilization

PWCSFB demobilized the first office trailer on December 21, 1995. Before February 26, 1996, PWCSFB completed construction of the roof cover and a security fence around the containment vault. PWCSFB also finished demobilizing (i.e., removed all equipment, storm drain plugs, trailers, electrical hookups, temporary water lines, hoses, temporary fencing, and water storage tanks). The final phase of the project, which consisted of patching the exposed subgrade inside the EZ with hot-mix asphalt, began on February 26, 1996, and was completed on March 6, 1996. The final bin of waste was

removed from the site on March 7, 1996, and a site walkthrough was conducted March 19, 1996, by EFA West, PRC, HLA, and PWCSFB to inspect site conditions at the end of removal activities. A final site walkthrough was conducted on March 27, 1996 by personnel from the EPA, DTSC, EFA West, HLA, and PWCSFB.

5.0 CURRENT SITE CONDITIONS

For this report, current site conditions are defined as those observed on March 19, 1996, during a site walkthrough.

Following the completion of this removal action, the only remaining structures at PPY were the overhead crane assembly and the containment vault. A temporary wooden roof structure with steel I-beam supports was constructed over the empty containment vault to keep out rain, and a locked security fence was placed around the vault to restrict access (see Section 4.6). Storm sewer drains that had been plugged during the removal action were returned to operation. Plate 8 is a plan drawing of the site at the end of the removal action.

All subsurface utilities at the site were generally untouched and left in place. Utilities that served demolished structures were cut off at ground level and capped with concrete.

As mentioned in Section 4.4.9, at the end of the project some tightly adhering ZC residue remained on portions of the four overhead crane towers north of the containment vault. The locations of the towers are marked on Plate 8.

After visually screening the towers during the March 19, 1996, site walkthrough attended by EFA West, PWCSFB, PRC, and HLA, EFA West decided that they could safely be recycled by Alco, which had purchased the crane assembly from the Navy as scrap metal before the removal action began. Alco was made aware of the condition of the towers and took responsibility for dismantling, handling, and transporting the towers to a recycling facility with the care needed to avoid breaking off the tightly adhering ZC residue.

6.0 SUMMARY

The PPY removal action began in November 1994 and was completed in March 1996. The objectives of the removal actions were to do the following:

- Demolish/remove all aboveground structures, with the exception of the overhead crane
- Demolish/remove the three pickling tanks contained within the below-grade containment vault
- Dispose of all existing and generated debris and liquids at the site.

The major hazardous contaminants of concern were chromium, lead, and zinc in the ZC primer overspray found throughout the site and acids found in the pickling and aboveground acid storage tanks (AAST).

The following aboveground structures were demolished:

- Plate storage and drying racks (which consisted of steel racks on concrete foundation pads)
- Building 422 (restroom facility)
- Building 423 (storage facility).

The following aboveground structures were removed: the cylindrical AAST and the rectangular AAST. Demolition and removal activities exposed soil in many areas where foundations had existed. After demolition and removal activities were completed, exposed soil areas were patched with concrete or asphalt.

With regard to the pickling tanks and the below-grade containment vault, the following tasks were accomplished in sequence. Liquids were pumped from both the pickling tanks and the containment vault. The pickling tanks were demolished in place. The pickling tank debris along with remaining sludge were removed. The containment vault was rinsed down. Rinse

water was removed. A roof was constructed over the containment vault. Accumulated water, from rain and possibly from infiltration through the vault walls, was removed. A chain link fence was installed around the vault.

Steel debris from the racks, structures, tanks and scrap was decontaminated, accumulated, and salvaged for recycling. ACM was generated from various structures during the removal activities and properly disposed. Other solid wastes were accumulated, characterized, and disposed as RCRA or non-RCRA hazardous waste. The contents of the pickling tanks, AASTs and the containment vault were characterized and properly disposed.

The following activities were performed concurrently with the removal activities: control of runoff from the EZ and ambient air monitoring.

Control of runoff from the EZ to the surrounding properties and street was necessary to prevent the migration and spread of contaminants. Runoff control was accomplished by performing the following:

- Conducting a survey of the site to determine drainage patterns
- Constructing containment berms as needed to prevent runoff from the site
- Collecting, sampling, and properly disposing waters from within the EZ.

Ambient air monitoring was conducted at the perimeter of the site during the removal activities to monitor offsite transport of contaminants of concern. The results of the air monitoring were compared with health-risk-based action levels. The overall conclusion drawn from results of the air monitoring is that the engineered dust suppression methods were effective in maintaining contaminant levels below the action levels.

In summary, the objectives of the removal action were met. There was no impact to the surrounding properties from water runoff because runoff control was implemented. No significant offsite health impacts are expected from the dust generated by site activities.

7.0 REFERENCES

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TABLES

Table 1. Action Levels for Airborne Contaminants
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Air Contaminant	Action Level ($\mu\text{g}/\text{m}^3$)	Basis for Action Level
Barium	0.575	Calculation of noncarcinogenic inhalation health effects
Zinc	51.4	Calculation of noncarcinogenic inhalation health effects
Arsenic	0.0616	Calculation of carcinogenic inhalation health effects
Cadmium	0.147	Calculation of carcinogenic inhalation health effects
Lead	2.15	LEADSPREAD Model
Nickel	7.07	Calculation of carcinogenic inhalation health effects
Hexavalent Chromium	0.0717	Calculation of carcinogenic inhalation health effects
Carcinogenic PAHs	Any detection	Background was a nondetectable concentration
Naphthalene	7.0	50% of the BAAQMD RSL /a/

$\mu\text{g}/\text{m}$ Micrograms per meter.

PAH Polynuclear aromatic hydrocarbon.

/a/ Because the mean background level for naphthalene was less than the applicable Bay Area Air Quality Management District (BAAQMD) air toxics Risk Screening Level (RSL), the action level was defined as 50 percent of the RSL.

**Table 2. Ambient Air Monitoring Results - Background, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Filter Number	Location	Sampling End Date	Mass of Particulates on filter (μg)	Sample Run Time (min)	Total Air Volume Thru Filter (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
Q-4228	Sta. 1	09/16/94	79400	1440	1631	48.67	48.37	0.030	99.24	0.061	0.8696	0.0005
Q-4229	Sta. 2	09/16/94	69100	1425	1614	42.81	45.36	0.028	85.96	0.053	0.8897	0.0006
Q-4230	Sta. 1	09/17/94	63300	1440	1631	38.81	42.10	0.026	118.8	0.073	0.6516	0.0004
Q-4231	Sta. 2	09/17/94	50800	1425	1614	31.47	45.86	0.028	98.24	0.061	0.4862	0.0003
Q-4232	Sta. 1	09/20/94	71600	1430	1620	44.20	26.31	0.016	143.9	0.089	0.7042	0.0004
Q-4239	Sta. 2	09/20/94	53100	1427	1617	32.85	35.59	0.022	72.68	0.045	0.6466	0.0004
Q-4233	Sta. 1	09/21/94	83000	1443	1635	50.78	31.58	0.019	147.1	0.090	1.028	0.0006
Q-4234	Sta. 2	09/21/94	75100	1438	1629	46.10	27.07	0.017	107.3	0.066	0.817	0.0005
Q-4516	Sta. 1	12/30/94	14200	335	404	35.18	19.05	0.047	13.78	0.034	0.25	0.0006
/a/	Sta. 2	12/30/94	--	--	--	--						
Q-4518	Sta. 3	12/30/94	16200	320	386	42.02						
Q-4519	Sta. 4	12/30/94	16500	310	374	44.17	20.55	0.055	26.82	0.072	0.64	0.0017
Mean Concentration:						30.47	--	0.022	--	0.049	--	0.0005
Standard Deviation:						19.75	--	0.017	--	0.032	--	0.0004

**Table 2. Ambient Air Monitoring Results - Background, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Filter Number	Location	Sampling End Date	Total Cadmium on Filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on Filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on Filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Hexavalent Chromium on Filter (μg)	Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-4228	Sta. 1	09/16/94	1.13	0.00069	40.6	0.025	14.69	0.0090	ND	--
Q-4229	Sta. 2	09/16/94	0.6341	0.00039	38.85	0.024	14.34	0.0089	ND	--
Q-4230	Sta. 1	09/17/94	0.391	0.00024	29.57	0.018	8.446	0.0052	ND	--
Q-4231	Sta. 2	09/17/94	0.396	0.00025	24.28	0.015	8.145	0.0050	ND	--
Q-4232	Sta. 1	09/20/94	0.4912	0.00030	32.83	0.020	8.621	0.0053	ND	--
Q-4239	Sta. 2	09/20/94	0.3007	0.00019	31.33	0.019	7.719	0.0048	ND	--
Q-4233	Sta. 1	09/21/94	0.6591	0.00040	44.36	0.027	10.6	0.0065	ND	--
Q-4234	Sta. 2	09/21/94	0.4411	0.00027	47.62	0.029	9.799	0.0060	ND	--
Q-4516	Sta. 1	12/30/94	0.15	0.00040	5.66	0.014	1.44	0.0040	ND(0.9398)	--
/a/	Sta. 2	12/30/94								
Q-4518	Sta. 3	12/30/94								
Q-4519	Sta. 4	12/30/94	0.32	0.00080	12.43	0.033	1.82	0.0050	ND(0.9398)	--
Mean Concentration:			--	0.00030	--	0.017	--	0.0046	--	--
Standard Deviation:			--	0.00025	--	0.011	--	0.0030	--	--

ND Not detected.

($\mu\text{g}/\text{m}^3$) Micrograms per cubic meter.

/a/ Sample not collected due to sampler malfunction.

**Table 3. Ambient Air Monitoring Results - Background, Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Sample Number	Location	Sampling End Date	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Carcinogenic PAHs in PUF (μg) /a/	Total Carcinogenic PAHs Concentration (μg/m ³)	Total Noncarcinogenic PAHs in PUF (μg) /b/	Total Non-carcinogenic PAHs Concentration (μg/m ³)
9437LPPY001	Sta. 1	09/16/94	1440	7.1	290	ND	--	226	0.781
9437LPPY002	Sta. 2	09/16/94	1425	7.2	291	ND	--	216	0.743
9437LPPY003	Sta. 1	09/17/94	1455	6.9	284	ND	--	72	0.253
9437LPPY004	Sta. 2	09/17/94	1440	7.3	298	ND	--	96	0.322
9437LPPY005	Sta. 1	09/20/94	1426	6.9	279	ND	--	30	0.108
9437LPPY007	Sta. 1	09/21/94	1448	6.9	283	ND	--	54	0.191
9437LPPY008	Sta. 2	09/21/94	1397	7.1	281	ND	--	51	0.182

CFM Cubic feet per minute.

ND Not detected.

PUF Polyurethane foam.

PAH Polynuclear aromatic hydrocarbon.

μg/m³ Micrograms per cubic meter.

/a/ Carcinogenic PAHs: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

/b/ Non-carcinogenic PAHs: naphthalene, 2-methylnaphthalene, 2-chloronaphthalene, acenaphthylene, acenaphthalene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(g,h,i)perylene.

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
610096	Station 1	12/28-29/94	/a/	1420	1711	/a/	47.30	0.028	65.16	0.038	0.77	0.0004
610095	Station 2	12/28-29/94	/a/	1430	1723	/a/	45.74	0.027	191.7	0.111	2.20	0.0013
6208399	Station 3	12/28-29/94	/a/	1440	1735	/a/	46.36	0.027	70.80	0.041	0.86	0.0005
6208398	Station 4	12/28-29/94	/a/	1450	1747	/a/	37.91	0.022	67.35	0.039	1.29	0.0007
6208396	Station 1	12/29-30/94	/a/	1430	1726	/a/	30.39	0.018	57.64	0.033	1.15	0.0007
6208397	Station 2	12/29-30/94	/a/	1420	1714	/a/	13.16	0.008	40.41	0.024	ND	--
5933207	Station 3	12/29-30/94	/a/	1430	1726	/a/	50.44	0.029	80.20	0.046	1.00	0.0006
5933208	Station 4	12/29-30/94	/a/	1430	1726	/a/	88.66	0.051	131.3	0.076	1.76	0.0010
Q-4516	Station 1	12/30/94	14200	335	404	35.18	19.05	0.047	13.78	0.034	0.25	0.0006
--/a/	Station 2	12/30/94	--	--	--	--						
Q-4518	Station 3	12/30/94	16200	320	386	42.02						
Q-4519	Station 4	12/30/94	16500	310	374	44.17	20.55	0.055	26.82	0.072	0.64	0.0017
Q-4520	Station 1	1/3-4/95	23600	1410	1689	13.97	8.15	0.005	3.13	0.002	0.37	0.0002
Q-4517	Station 2	1/3-4/95	49300	1410	1689	29.19	11.90	0.007	199.9	0.118	3.63	0.0022
Q-4521	Station 3	1/3-4/95	31400	1410	1689	18.59						
--/b/	Station 4	1/3-4/95	--									
Q-4522	Station 1	1/4-5/95	24000	1435	1712	14.02	9.09	0.005	31.01	0.018	0.60	0.0004
Q-4523	Station 2	1/4-5/95	45800	1465	1748	26.20	14.72	0.008	115.3	0.066	1.82	0.0010
Q-4524	Station 3	1/4-5/95	35700	1470	1754	20.35						
--/b/	Station 4	1/4-5/95										
Q-4525/c/	Station 1	1/5/95	7200	390	465	15.47						
Q-4526/c/	Station 2	1/5/95	24800	370	441	56.18						
Q-4527/c/	Station 3	1/5/95	19100	355	424	45.09						
--/b/	Station 4	1/5/95										
--	--	1/6/95	No sampling. Scheduled day off for contractor.									
Q-4528	Station 1	1/9-10/95	57100	1410	1686	33.88	6.27	0.004	74.56	0.044	ND	--
Q-4529	Station 2	1/9-10/95	50400	1440	1721	29.28						
Q-4530	Station 3	1/9-10/95	44100	1445	1727	25.53						
Q-4531	Station 4	1/9-10/95	55100	1450	1733	31.79	4.07	0.002	38.22	0.022	0.43	0.0002

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
610096	Station 1	12/28-29	0.34	0.0002	18.98	0.011	6.02	0.004	8.15	0.005	ND	--
610095	Station 2	12/28-29	1.14	0.0007	36.03	0.021	12.53	0.007	23.18	0.013	ND	--
6208399	Station 3	12/28-29	0.40	0.0002	18.80	0.011	6.64	0.004	8.46	0.005	ND	--
6208398	Station 4	12/28-29	0.40	0.0002	21.74	0.012	7.58	0.004	9.09	0.005	ND	--
6208396	Station 1	12/29-30	0.49	0.0003	27.98	0.016	4.17	0.002	5.95	0.003	ND	--
6208397	Station 2	12/29-30	0.42	0.0002	8.08	0.005	1.43	0.001	5.95	0.003	ND	--
5933207	Station 3	12/29-30	0.50	0.0003	29.07	0.017	4.10	0.002	9.09	0.005	ND	--
5933208	Station 4	12/29-30	0.59	0.0003	38.85	0.023	6.77	0.004	117.2	0.068	ND	--
Q-4516	Station 1	12/30/94	0.15	0.0004	5.66	0.014	1.44	0.004	ND (2.506)	--	ND (0.9398)	--
--/a/	Station 2	12/30/94										
Q-4518	Station 3	12/30/94										
Q-4519	Station 4	12/30/94	0.32	0.0008	12.43	0.033	1.82	0.005	5.51	0.015	ND (0.9398)	--
Q-4520	Station 1	1/3-4/95	0.32	0.0002	20.52	0.012	1.80	0.001	19.74	0.012	2.51	0.0015
Q-4517	Station 2	1/3-4/95	0.95	0.0006	81.76	0.048	11.94	0.007	22.24	0.013	2.19	0.0013
Q-4521	Station 3	1/3-4/95										
--/b/	Station 4	1/3-4/95										
Q-4522	Station 1	1/4-5/95	1.15	0.0007	15.32	0.009	2.50	0.001	4.70	0.003	ND	--
Q-4523	Station 2	1/4-5/95	1.00	0.0006	25.88	0.015	6.89	0.004	14.41	0.008	ND	--
Q-4524	Station 3	1/4-5/95										
--/b/	Station 4	1/4-5/95										
Q-4525/c/	Station 1	1/5/95										
Q-4526/c/	Station 2	1/5/95										
Q-4527/c/	Station 3	1/5/95										
--/b/	Station 4	1/5/95										
--	--	1/6/95	No sampling. Scheduled day off for contractor.									
Q-4528	Station 1	1/9-10/95	1.60	0.0009	64.22	0.038	4.04	0.002	4.70	0.003	ND	--
Q-4529	Station 2	1/9-10/95										
Q-4530	Station 3	1/9-10/95										
Q-4531	Station 4	1/9-10/95	0.67	0.0004	19.33	0.011	5.39	0.003	7.21	0.004	4.39	0.0025

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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
--	--	1/10-11/95	No sampling. No demolition work performed 1/10/95.									
Q-4533/c/	Station 1	1/11-12/95	40100	1425	1700	23.59						
Q-4534/c/	Station 2	1/11-12/95	48300	1450	1730	27.92						
Q-4535/c/	Station 3	1/11-12/95	31300	1445	1724	18.15						
Q-4536/c/	Station 4	1/11-12/95	42200	1445	1724	24.48						
--	--	1/12-13/95	No sampling. Limited dust-generating work performed on 1/12/95.									
Q-4537	Station 1	1/13/95	7000	385	460	15.21	4.39	0.010	5.95	0.013	ND	--
Q-4538	Station 2	1/13/95	6100	375	448	13.61						
Q-4539	Station 3	1/13/95	7400	370	442	16.73	ND	--	9.40	0.021	ND	--
Q-4540	Station 4	1/13/95	4800	370	442	10.85						
--	--	1/16-17/95	No sampling. Holiday on 1/16/95.									
Q-4541/c/	Station 1	1/17-18/95	55500	1440	1721	32.24						
Q-4542/c/	Station 2	1/17-18/95	72000	1450	1733	41.54						
Q-4543/c/	Station 3	1/17-18/95	52500	1460	1745	30.08						
Q-4544/c/	Station 4	1/17-18/95	69600	1460	1745	39.88						
Q-4545	Station 1	1/18-19/95	33800	1435	1715	19.70	20.36	0.012	52.94	0.031	0.42	0.0002
Q-4546	Station 2	1/18-19/95	90800	1440	1721	52.75	57.64	0.033	246.9	0.143	1.83	0.0011
Q-4547	Station 3	1/18-19/95	44600	1440	1721	25.91						
Q-4548	Station 4	1/18-19/95	91000	1445	1727	52.68	40.10	0.023	113.7	0.066	1.75	0.0010
Q-4549/c/	Station 1	1/19/95	17300	420	502	34.46						
Q-4558/c/	Station 2	1/19/95	27800	360	430	64.60						
Q-4559/c/	Station 3	1/19/95	22300	340	406	54.86						
Q-4560/c/	Station 4	1/19/95	26500	330	394	67.17						
--	--	1/19-20/95	No sampling. Scheduled day off for contractor.									
Q-4561	Station 1	1/23-24/95	20300	1440	1721	11.79	5.95	0.003	29.45	0.017	ND	--
Q-4562	Station 2	1/23-24/95	41900	1440	1721	24.34	10.65	0.006	103.70	0.060	0.34	0.0002
Q-4563	Station 3	1/23-24/95	13600	1445	1727	7.87						

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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
--	--	1/10-11/95	No sampling. No demolition work performed 1/10/95.									
Q-4533/c/	Station 1	1/11-12/95										
Q-4534/c/	Station 2	1/11-12/95										
Q-4535/c/	Station 3	1/11-12/95										
Q-4536/c/	Station 4	1/11-12/95										
--	--	1/12-13/95	No sampling. Limited dust-generating work performed on 1/12/95.									
Q-4537	Station 1	1/13/95	0.06	0.0001	1.70	0.004	1.15	0.003	ND	--	ND	--
Q-4538	Station 2	1/13/95										
Q-4539	Station 3	1/13/95	0.04	0.0001	1.22	0.003	1.52	0.003	ND	--	1.75	0.0040
Q-4540	Station 4	1/13/95										
--	--	1/16-17/95	No sampling. Holiday on 1/16/95.									
Q-4541/c/	Station 1	1/17-18/95										
Q-4542/c/	Station 2	1/17-18/95										
Q-4543/c/	Station 3	1/17-18/95										
Q-4544/c/	Station 4	1/17-18/95										
Q-4545	Station 1	1/18-19/95	0.59	0.0003	28.70	0.017	5.55	0.003	6.27	0.004	ND	--
Q-4546	Station 2	1/18-19/95	6.64	0.0039	119.0	0.069	32.58	0.019	27.88	0.016	ND	--
Q-4547	Station 3	1/18-19/95										
Q-4548	Station 4	1/18-19/95	1.41	0.0008	62.03	0.036	28.35	0.016	26.63	0.015	ND	--
Q-4549/c/	Station 1	1/19/95										
Q-4558/c/	Station 2	1/19/95										
Q-4559/c/	Station 3	1/19/95										
Q-4560/c/	Station 4	1/19/95										
--	--	1/19-20/95	No sampling. Scheduled day off for contractor.									
Q-4561	Station 1	1/23-24/95	0.43	0.0002	11.53	0.007	5.01	0.003	5.01	0.003	ND	--
Q-4562	Station 2	1/23-24/95	3.08	0.0018	25.50	0.015	10.49	0.006	8.46	0.005	ND	--
Q-4563	Station 3	1/23-24/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-4564	Station 4	1/23-24/95	26300	1440	1721	15.25						
--	--	1/23-24/95	No sampling. No demolition work performed 1/24/95.									
Q-4565	Station 1	1/25-26/95	29200	1475	1763	16.56	19.55	0.011	43.36	0.025	0.43	0.0002
Q-4566	Station 2	1/25-26/95	55100	1595	1907	28.90	29.32	0.015	112.50	0.059	2.61	0.0014
Q-4567	Station 3	1/25-26/95	36700	1605	1919	19.13						
Q-4568	Station 4	1/25-26/95	38500	1610	1925	20.00						
--	--	1/26-27/95	No sampling. No dust generating work performed on 1/26/95.									
--	--	1/27/95	No sampling. No demolition work performed 1/27/95.									
Q-4569	Station 1	1/30-31/95	41000	1440	1721	23.82	29.57	0.017	99.75	0.058	0.74	0.0004
Q-4571	Station 2	1/30-31/95	69600	1405	1680	41.44						
Q-4570	Station 3	1/30-31/95	59300	1440	1721	34.45	35.84	0.021	129.30	0.075	1.09	0.0006
Q-4572	Station 4	1/30-31/95	67700	1360	1626	41.64						
--	--	1/31-2/1/95	No sampling. No demolition work performed 1/31/95.									
--	--	2/1-2/95	No sampling. No demolition work performed 2/1/95.									
Q-4573	Station 1	2/2-3/95	16700	405	474	35.20	5.01	0.011	20.99	0.044	ND	--
Q-5165	Station 2	2/2-3/95	48400	1475	1174	41.23						
Q-5166	Station 3	2/2-3/95	78000	1470	1722	45.30						
Q-5167	Station 4	2/2-3/95	90400	1460	2073	43.61	48.87	0.024	152.60	0.074	1.52	0.0007
--	--	2/3/95	No sampling. Scheduled day off for contractor.									
Q-5168	Station 1	2/6-7/95	51700	1185	1545	33.46	23.18	0.015	55.14	0.036	0.34	0.0002
Q-5169	Station 2	2/6-7/95	107900	1440	1176	91.77						
Q-5170	Station 3	2/6-7/95	83200	1445	1762	47.22						
Q-5171	Station 4	2/6-7/95	143200	1460	1618	88.51	50.75	0.031	189.20	0.117	1.65	0.0010
Q-5172/c/	Station 1	2/7-8/95	110300	1450	2091	52.76						
Q-5173/c/	Station 2	2/7-8/95	66300	1435	1138	58.27						
Q-5174/c/	Station 3	2/7-8/95	95300	1430	1745	54.62						
Q-5175/c/	Station 4	2/7-8/95	83700	1430	1586	52.79						

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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-4564	Station 4	1/23-24/95										
--	--	1/23-24/95	No sampling. No demolition work performed 1/24/95.									
Q-4565	Station 1	1/25-26/95	5.56	0.0032	30.32	0.017	18.35	0.010	11.28	0.006	ND	--
Q-4566	Station 2	1/25-26/95	7.95	0.0042	45.61	0.024	30.07	0.016	26.06	0.014	ND	--
Q-4567	Station 3	1/25-26/95										
Q-4568	Station 4	1/25-26/95										
--	--	1/26-27/95	No sampling. No dust generating work performed on 1/26/95.									
--	--	1/27/95	No sampling. No demolition work performed 1/27/95.									
Q-4569	Station 1	1/30-31/95	3.31	0.0019	79.95	0.046	27.82	0.016	6.02	0.003	ND	--
Q-4571	Station 2	1/30-31/95										
Q-4570	Station 3	1/30-31/95	3.91	0.0023	122.60	0.071	30.07	0.017	9.02	0.005	ND	--
Q-4572	Station 4	1/30-31/95										
--	--	1/31-2/1/95	No sampling. No demolition work performed 1/31/95.									
--	--	2/1-2/95	No sampling. No demolition work performed 2/1/95.									
Q-4573	Station 1	2/2-3/95	0.15	0.0003	5.20	0.011	1.61	0.003	ND	--	ND	--
Q-5165	Station 2	2/2-3/95										
Q-5166	Station 3	2/2-3/95										
Q-5167	Station 4	2/2-3/95	2.51	0.0012	61.71	0.030	22.49	0.011	41.98	0.020	ND	--
--	--	2/3/95	No sampling. Scheduled day off for contractor.									
Q-5168	Station 1	2/6-7/95	0.49	0.0003	21.87	0.014	11.50	0.007	4.70	0.003	ND	--
Q-5169	Station 2	2/6-7/95										
Q-5170	Station 3	2/6-7/95										
Q-5171	Station 4	2/6-7/95	1.51	0.0009	80.51	0.050	21.15	0.013	18.17	0.011	ND	--
Q-5172 /c/	Station 1	2/7-8/95										
Q-5173 /c/	Station 2	2/7-8/95										
Q-5174 /c/	Station 3	2/7-8/95										
Q-5175 /c/	Station 4	2/7-8/95										

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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-5176	Station 1	2/8-9/95	77900	1630	2433	32.02	42.92	0.018	161.60	0.066	1.68	0.0007
Q-5177	Station 2	2/8-9/95	84800	1620	2062	41.12						
Q-5178	Station 3	2/8-9/95	89300	1605	2035	43.88	46.36	0.023	166.30	0.082	1.86	0.0009
Q-5179	Station 4	2/8-9/95	77800	1600	1770	43.96						
--	--	2/9-10/95	No sampling. No dust generating work performed on 2/9/95.									
--	--	2/10/95	No sampling. No dust generating work performed on 2/10/95.									
--	--	2/13-14/95	No sampling. No demolition work performed 2/13/95.									
--	--	2/14-15/95	No sampling. No demolition work performed 2/14/95.									
--	--	2/15-16/95	No sampling. No demolition work performed 2/15/95.									
Q-5180	Station 1	2/16/95	35700	365	533	67.01						
Q-5181	Station 2	2/16/95	30100	355	288	104.46						
Q-5182	Station 3	2/16/95	84500	340	412	205.02	33.83	0.082	250.60	0.608	1.01	0.0025
Q-5183	Station 4	2/16/95	27500	340	367	74.83	15.29	0.042	57.14	0.155	0.45	0.0012
--	--	2/17/95	No sampling. Scheduled day off for contractor.									
--	--	2/20-21/95	No sampling. Holiday on 2/20/95.									
Q-5184/c/	Station 1	2/21-22/95	80200	1450	2053	39.06						
Q-5185/c/	Station 2	2/21-22/95	104200	1485	1215	85.78						
Q-5186/c/	Station 3	2/21-22/95	27300	1490	1820	15.00						
Q-5187/c/	Station 4	2/21-22/95	69000	1490	1623	42.51						
Q-5188	Station 1	2/22-23/95	31800	1440	1718	18.51	8.77	0.005	49.62	0.029	0.39	0.0002
Q-5189	Station 2	2/22-23/95	99500	1430	1166	85.31	42.10	0.036	330.80	0.284	3.11	0.0027
--	Station 3	/b/	--	--	--	--						
Q-5190	Station 4	2/22-23/95	69800	1420	1513	46.14						
Q-5191	Station 1	2/23-24/95	77900	1470	2075	37.54						
Q-5192	Station 2	2/23-24/95	121700	1450	1112	109.40	45.11	0.041	523.80	0.471	4.96	0.0045
--	Station 3	/b/	--	--	--	--						
Q-5193	Station 4	2/23-24/95	63500	1445	1569	40.47	15.04	0.010	84.21	0.054	0.98	0.0006
--	--	2/24/95	No sampling. No demolition work performed 2/24/95.									

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-5176	Station 1	2/8-9/95	0.62	0.0003	42.92	0.018	14.41	0.006	13.16	0.005	ND	--
Q-5177	Station 2	2/8-9/95										
Q-5178	Station 3	2/8-9/95	0.57	0.0003	50.12	0.025	16.07	0.008	15.04	0.007	ND	--
Q-5179	Station 4	2/8-9/95										
--	--	2/9-10/95	No sampling. No dust generating work performed on 2/9/95.									
--	--	2/10/95	No sampling. No dust generating work performed on 2/10/95.									
--	--	2/13-14/95	No sampling. No demolition work performed 2/13/95.									
--	--	2/14-15/95	No sampling. No demolition work performed 2/14/95.									
--	--	2/15-16/95	No sampling. No demolition work performed 2/15/95.									
Q-5180	Station 1	2/16/95										
Q-5181	Station 2	2/16/95										
Q-5182	Station 3	2/16/95	0.60	0.0014	129.30	0.314	11.68	0.028	40.60	0.099	ND	--
Q-5183	Station 4	2/16/95	0.23	0.0006	15.96	0.043	4.01	0.011	5.51	0.015	ND	--
--	--	2/17/95	No sampling. Scheduled day off for contractor.									
--	--	2/20-21/95	No sampling. Holiday on 2/20/95.									
Q-5184 /c/	Station 1	2/21-22/95										
Q-5185 /c/	Station 2	2/21-22/95										
Q-5186 /c/	Station 3	2/21-22/95										
Q-5187 /c/	Station 4	2/21-22/95										
Q-5188	Station 1	2/22-23/95	4.19	0.0024	14.36	0.008	25.56	0.015	10.78	0.006	ND	--
Q-5189	Station 2	2/22-23/95	6.07	0.0052	40.60	0.035	21.13	0.018	33.33	0.029	ND	--
--	Station 3	/b/										
Q-5190	Station 4	2/22-23/95										
Q-5191	Station 1	2/23-24/95										
Q-5192	Station 2	2/23-24/95	3.76	0.0034	65.66	0.059	18.92	0.017	31.83	0.029	ND	--
--	Station 3	/b/										
Q-5193	Station 4	2/23-24/95	1.32	0.0008	28.57	0.018	21.60	0.014	9.52	0.006	ND	--
--	--	2/24/95	No sampling. No demolition work performed 2/24/95.									

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-5194	Station 1	2/27-28/95	90300	1445	2202	41.01						
Q-5195	Station 2	2/27-28/95	68600	1455	1329	51.60	29.82	0.022	263.10	0.198	0.97	0.0007
Q-5198	Station 3	2/27-28/95	91600	1455	1576	58.12						
Q-5199	Station 4	2/27-28/95	97400	1450	1577	61.75	43.86	0.028	105.00	0.067	1.49	0.0009
--	--	2/28-3/1/95	No sampling. Limited dust-generating work performed on 2/28/95.									
Q-5200	Station 1	3/1-2/95	81600	1670	2416	33.78	38.34	0.016	97.99	0.041	1.45	0.0006
Q-0001	Station 2	3/1-2/95	52900	1640	1344	39.35						
Q-0003	Station 3	3/1-2/95	65800	1540	1785	36.86						
Q-0002	Station 4	3/1-2/95	66900	1625	1774	37.72	37.34	0.021	76.94	0.043	1.57	0.0009
--	--	3/2-3/95	Previous sampling period extended to cover work during morning of 3/2/95.									
--	--	3/3/95	No sampling. Scheduled day off for contractor.									
Q-5196/c/	Station 1	3/6-7/95	63500	1435	1838	34.55						
Q-5197/c/	Station 2	3/6-7/95	59100	1440	1245	47.46						
--	Station 3	/b/	--	--	--	--						
Q-0040/c/	Station 4	3/6-7/95	63800	1445	1940	32.88						
Q-0041	Station 1	3/7-8/95	85700	1455	1871	45.81	25.06	0.013	103.80	0.055	0.87	0.0005
Q-0042	Station 2	3/7-8/95	53400	1455	1390	38.42	14.54	0.010	93.48	0.067	0.56	0.0004
Q-0043	Station 3	3/7-8/95	84000	1445	1740	48.27						
Q-0044	Station 4	3/7-8/95	81700	1435	1971	41.45						
--	--	3/8-9/95	No sampling. Limited dust-generating work performed on 3/8/95.									
--	--	3/9-10/95	No sampling. No demolition work performed 3/9/95.									
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.									
--	--	3/13-14/95	No sampling. Limited dust-generating work performed on 3/13/95.									
Q-0045/c/	Station 1	3/14-15/95	51200	1445	1851	27.66						
Q-0046/c/	Station 2	3/14-15/95	39100	1470	1272	30.75						
--	Station 3	/b/	--	--	--	--						
Q-0047/c/	Station 4	3/14-15/95	43200	1485	2032	21.26						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-5194	Station 1	2/27-28/95										
Q-5195	Station 2	2/27-28/95	1.44	0.0011	33.33	0.025	11.75	0.009	14.79	0.011	ND	--
Q-5198	Station 3	2/27-28/95										
Q-5199	Station 4	2/27-28/95	1.11	0.0007	39.60	0.025	16.82	0.011	6.27	0.004	ND	--
--	--	2/28-3/1/95	No sampling. Limited dust-generating work performed on 2/28/95.									
Q-5200	Station 1	3/1-2/95	0.79	0.0003	32.58	0.013	27.32	0.011	6.02	0.002	ND	--
Q-0001	Station 2	3/1-2/95										
Q-0003	Station 3	3/1-2/95										
Q-0002	Station 4	3/1-2/95	0.95	0.0005	28.07	0.016	41.85	0.024	15.79	0.009	ND	--
--	--	3/2-3/95	Previous sampling period extended to cover work during morning of 3/2/95.									
--	--	3/3/95	No sampling. Scheduled day off for contractor.									
Q-5196 /c/	Station 1	3/6-7/95										
Q-5197 /c/	Station 2	3/6-7/95										
--	Station 3	/b/										
Q-0040 /c/	Station 4	3/6-7/95										
Q-0041	Station 1	3/7-8/95	1.92	0.0010	153.40	0.082	52.88	0.028	8.77	0.005	ND	--
Q-0042	Station 2	3/7-8/95	1.19	0.0009	66.41	0.048	11.83	0.009	8.27	0.006	ND	--
Q-0043	Station 3	3/7-8/95										
Q-0044	Station 4	3/7-8/95										
--	--	3/8-9/95	No sampling. Limited dust-generating work performed on 3/8/95.									
--	--	3/9-10/95	No sampling. No demolition work performed 3/9/95.									
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.									
--	--	3/13-14/95	No sampling. Limited dust-generating work performed on 3/13/95.									
Q-0045 /c/	Station 1	3/14-15/95										
Q-0046 /c/	Station 2	3/14-15/95										
--	Station 3	/b/										
Q-0047 /c/	Station 4	3/14-15/95										

**Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0048	Station 1	3/15-16/95	96500	1470	1886	51.17	17.79	0.009	82.20	0.044	1.44	0.0008
Q-0049	Station 2	3/15-16/95	89800	1455	1260	55.38						
--	Station 3	/b/	--	--	--	--						
Q-0050	Station 4	3/15-16/95	12200	250	343	35.61	ND	--	21.30	0.062	ND	--
Q-0051	Station 1	3/16-17/95	103100	1530	1967	52.42	4.76	0.002	84.71	0.043	0.51	0.0003
Q-0052	Station 2	3/16-17/95	103800	1520	1518	68.38						
--	Station 3	/b/										
Q-0053	Station 4	3/16-17/95	107400	1505	2067	51.97	5.01	0.002	164.20	0.079	0.73	0.0004
--	--	3/17/95	No sampling. Scheduled day off for contractor.									
--	--	3/20-21/95	No sampling. No demolition work performed 3/20/95.									
Q-0054	Station 1	3/21-22/95	41700	1485	1907	21.87	4.01	0.002	55.14	0.029	ND	--
Q-0055	Station 2	3/21-22/95	34500	1485	1481	23.29						
--	Station 3	/b/										
Q-0056	Station 4	3/21-22/95	43300	1480	2030	21.33	9.77	0.005	75.94	0.037	0.28	0.0001
--	--	3/22-23/95	No sampling. No demolition work performed 3/22/95.									
--	--	3/23-24/95	No sampling. No demolition work performed 3/23/95.									
Q-0057/c/	Station 1	3/24/95	16500	385	492	33.52						
Q-0058/c/	Station 2	3/24/95	14600	375	372	39.20						
Q-0059/c/	Station 3	3/24/95	11300	375	426	26.52						
Q-0347/c/	Station 4	3/24/95	12800	370	496	25.81						
Q-0348	Station 1	3/27-28/95	66800	1450	1862	35.88	38.60	0.021	112.50	0.060	0.81	0.0004
--	Station 2	/b/										
Q-0350	Station 3	3/27-28/95	48400	1445	1649	29.35						
Q-0351	Station 4	3/27-28/95	71600	1455	1959	36.55	38.60	0.020	144.10	0.074	0.82	0.0004
Q-0352	Station 1	3/28-29/95	94200	1515	1884	50.00	52.88	0.028	170.70	0.091	1.00	0.0005
--	Station 2	/b/										
Q-0354	Station 3	3/28-29/95	62600	1390	1594	39.27						
Q-0355	Station 4	3/28-29/95	110800	1540	2123	52.19	43.11	0.020	174.90	0.082	1.26	0.0006

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0048	Station 1	3/15-16/95	1.95	0.0010	29.82	0.016	9.92	0.005	16.79	0.009	ND	--
Q-0049	Station 2	3/15-16/95										
--	Station 3	/b/										
Q-0050	Station 4	3/15-16/95	0.06	0.0002	5.94	0.017	1.87	0.005	4.26	0.012	ND	--
Q-0051	Station 1	3/16-17/95	0.34	0.0002	28.57	0.015	9.05	0.005	14.29	0.007	ND	--
Q-0052	Station 2	3/16-17/95										
--	Station 3	/b/										
Q-0053	Station 4	3/16-17/95	0.56	0.0003	104.30	0.050	10.60	0.005	63.66	0.031	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.									
--	--	3/20-21/95	No sampling. No demolition work performed 3/20/95.									
Q-0054	Station 1	3/21-22/95	0.11	0.0001	6.72	0.004	1.59	0.001	ND	--	ND	--
Q-0055	Station 2	3/21-22/95										
--	Station 3	/b/										
Q-0056	Station 4	3/21-22/95	0.26	0.0001	9.70	0.005	4.16	0.002	6.77	0.003	2.51	0.001
--	--	3/22-23/95	No sampling. No demolition work performed 3/22/95.									
--	--	3/23-24/95	No sampling. No demolition work performed 3/23/95.									
Q-0057/b/	Station 1	3/24/95										
Q-0058/b/	Station 2	3/24/95										
Q-0059/b/	Station 3	3/24/95										
Q-0347/b/	Station 4	3/24/95										
Q-0348	Station 1	3/27-28/95	0.51	0.0003	67.17	0.036	7.95	0.004	7.52	0.004	ND	--
--	Station 2	/b/										
Q-0350	Station 3	3/27-28/95										
Q-0351	Station 4	3/27-28/95	0.56	0.0003	90.47	0.046	10.63	0.005	21.80	0.011	ND	--
Q-0352	Station 1	3/28-29/95	0.81	0.0004	53.13	0.028	17.57	0.009	14.29	0.008	ND	--
--	Station 2	/b/										
Q-0354	Station 3	3/28-29/95										
Q-0355	Station 4	3/28-29/95	0.56	0.0003	40.35	0.021	14.06	0.007	14.29	0.008	ND	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0349	Station 1	3/29-30/95	82200	1400	1773	46.36	43.61	0.025	135.80	0.077	1.36	0.0008
Q-0353	Station 2	3/29-30/95	71900	1405	1409	51.05						
--	Station 3	/b/										
Q-0356	Station 4	3/29-30/95	104200	1415	1842	56.58	46.61	0.025	158.60	0.086	1.51	0.0008
Q-0357	Station 1	3/30-31/95	84700	1275	1583	53.51	36.09	0.023	184.00	0.116	1.04	0.0007
Q-0358	Station 2	3/30-31/95	98800	1320	1322	74.71	35.09	0.027	144.90	0.110	0.99	0.0008
Q-0359	Station 3	3/30-31/95	82400	1295	1409	58.49						
Q-0360	Station 4	3/30-31/95	92000	1305	1731	53.15						
--	--	3/31/95	No sampling. Scheduled day off for contractor.									
Q-0361	Station 1	4/3-4/95	61600	1495	1577	39.06	17.54	0.011	102.80	0.065	0.36	0.0002
--	Station 2	/b/										
Q-0362	Station 3	4/3-4/95	245000	1490	1572	155.85	75.69	0.048	636.00	0.405	2.03	0.0013
Q-0363	Station 4	4/3-4/95	130700	1500	1923	67.97						
Q-0364	Station 1	4/4-5/95	63200	1475	1493	42.34	20.80	0.014	231.10	0.155	0.32	0.0002
--	Station 2	/b/										
Q-0365	Station 3	4/4-5/95	191100	1490	1577	121.20	42.86	0.027	491.20	0.312	1.29	0.0008
Q-0366	Station 4	4/4-5/95	96800	1490	1916	50.53						
Q-0367	Station 1	4/5-6/95	50500	1405	1425	35.43	34.33	0.024	117.50	0.082	0.36	0.0003
Q-0368	Station 2	4/5-6/95	45400	1435	1417	32.04						
Q-0369	Station 3	4/5-6/95	72100	1430	1557	46.31	37.09	0.024	275.70	0.177	0.47	0.0003
Q-0370	Station 4	4/5-6/95	76300	1430	1954	39.05						
Q-0371/c/	Station 1	4/6-7/95	27900	1660	1683	16.58						
Q-0372/c/	Station 2	4/6-7/95	22800	1620	1599	14.26						
Q-0373/c/	Station 3	4/6-7/95	39800	1615	1712	23.25						
Q-0374/c/	Station 4	4/6-7/95	38000	1605	2150	17.67						
--	--	4/7/95	Previous sampling period extended to cover work during morning of 4/7/95.									

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-0349	Station 1	3/29-30/95	0.44	0.0002	39.60	0.022	10.53	0.006	7.77	0.004	ND	--
Q-0353	Station 2	3/29-30/95										
--	Station 3	/b/										
Q-0356	Station 4	3/29-30/95	1.72	0.0009	50.88	0.028	14.46	0.008	11.03	0.006	ND	--
Q-0357	Station 1	3/30-31/95	0.68	0.0004	44.61	0.028	11.30	0.007	9.52	0.006	ND	--
Q-0358	Station 2	3/30-31/95	1.12	0.0008	56.64	0.043	21.23	0.016	19.30	0.015	ND	--
Q-0359	Station 3	3/30-31/95										
Q-0360	Station 4	3/30-31/95										
--	--	3/31/95	No sampling. Scheduled day off for contractor.									
Q-0361	Station 1	4/3-4/95	0.25	0.0002	27.07	0.017	14.99	0.010	3.51	0.002	ND	--
--	Station 2	/b/										
Q-0362	Station 3	4/3-4/95	1.36	0.0009	380.90	0.242	32.33	0.021	120.30	0.077	10.65	0.007
Q-0363	Station 4	4/3-4/95										
Q-0364	Station 1	4/4-5/95	0.76	0.0005	21.20	0.014	4.44	0.003	3.01	0.002	ND	--
--	Station 2	/b/										
Q-0365	Station 3	4/4-5/95	0.92	0.0006	219.00	0.139	17.67	0.011	87.47	0.055	11.28	0.007
Q-0366	Station 4	4/4-5/95										
Q-0367	Station 1	4/5-6/95	0.36	0.0002	36.09	0.025	18.17	0.013	6.52	0.005	ND	--
Q-0368	Station 2	4/5-6/95										
Q-0369	Station 3	4/5-6/95	0.76	0.0005	85.71	0.055	12.18	0.008	59.90	0.038	14.57	0.009
Q-0370	Station 4	4/5-6/95										
Q-0371/c/	Station 1	4/6-7/95										
Q-0372/c/	Station 2	4/6-7/95										
Q-0373/c/	Station 3	4/6-7/95										
Q-0374/c/	Station 4	4/6-7/95										
--	--	4/7/95	Previous sampling period extended to cover work during morning of 4/7/95.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0375/c/	Station 1	4/10-11/95	47900	1470	1487	32.21						
Q-0376/c/	Station 2	4/10-11/95	53900	1465	1442	37.37						
Q-0377/c/	Station 3	4/10-11/95	94700	1465	1549	61.12						
Q-0378/c/	Station 4	4/10-11/95	83200	1460	1952	42.63						
--	--	4/11-12/95	No sampling. Limited dust-generating work performed on 4/11/95.									
Q-0379	Station 1	4/12-13/95	79700	1420	1437	55.46	18.55	0.013	3459.00	2.407	0.94	0.0007
Q-0380	Station 2	4/12-13/95	63100	1425	1439	43.84						
Q-0381	Station 3	4/12-13/95	160600	1430	1593	100.80	42.60	0.027	2489.00	1.562	1.42	0.0009
Q-0382	Station 4	4/12-13/95	103600	1430	1913	54.17						
Q-0383	Station 1	4/13-14/95	93800	1460	1468	63.88	42.10	0.029	206.80	0.141	0.25	0.0002
Q-0384	Station 2	4/13-14/95	142300	1455	1460	97.46						
Q-0385	Station 3	4/13-14/95	151900	1450	1565	97.06	63.66	0.041	396.00	0.253	0.47	0.0003
Q-0386	Station 4	4/13-14/95	163300	1445	1920	85.04						
--	--	4/14/95	No sampling. Scheduled day off for contractor.									
Q-5982/c/	Station 1	4/17-18/95	29500	1475	1483	19.90						
Q-5983/c/	Station 2	4/17-18/95	21500	1485	1563	13.76						
Q-5984/c/	Station 3	4/17-18/95	40300	1490	1566	25.74						
Q-5985/c/	Station 4	4/17-18/95	38200	1505	1999	19.11						
Q-5986	Station 1	4/18-19/95	73900	1630	1606	46.02	23.81	0.015	65.41	0.041	ND	--
Q-5987	Station 2	4/18-19/95	101600	1630	1640	61.96						
Q-5988	Station 3	4/18-19/95	118400	1630	1673	70.78	31.33	0.019	283.20	0.169	0.41	0.0002
Q-5989	Station 4	4/18-19/95	137400	1630	2172	63.27						
Q-5990	Station 1	4/19-20/95	56200	1435	1430	39.30	35.09	0.025	78.69	0.055	ND	--
Q-5991	Station 2	4/19-20/95	95700	1435	1337	71.57	34.33	0.026	263.10	0.197	0.32	0.0002
Q-5992	Station 3	4/19-20/95	73600	1440	1437	51.20						
Q-5993	Station 4	4/19-20/95	88500	1440	1918	46.14						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-0375/c/	Station 1	4/10-11/95										
Q-0376/c/	Station 2	4/10-11/95										
Q-0377/c/	Station 3	4/10-11/95										
Q-0378/c/	Station 4	4/10-11/95										
--	--	4/11-12/95	No sampling. Limited dust-generating work performed on 4/11/95.									
Q-0379	Station 1	4/12-13/95	2.08	0.0014	34.08	0.024	10.07	0.007	ND	--	ND	--
Q-0380	Station 2	4/12-13/95										
Q-0381	Station 3	4/12-13/95	1.99	0.0012	204.50	0.128	20.48	0.013	88.72	0.056	19.23	0.012
Q-0382	Station 4	4/12-13/95										
Q-0383	Station 1	4/13-14/95	0.26	0.0002	39.35	0.027	6.07	0.004	ND	--	ND	--
Q-0384	Station 2	4/13-14/95										
Q-0385	Station 3	4/13-14/95	0.54	0.0003	180.40	0.115	14.24	0.009	83.46	0.053	13.91	0.009
Q-0386	Station 4	4/13-14/95										
--	--	4/14/95	No sampling. Scheduled day off for contractor.									
Q-5982/c/	Station 1	4/17-18/95										
Q-5983/c/	Station 2	4/17-18/95										
Q-5984/c/	Station 3	4/17-18/95										
Q-5985/c/	Station 4	4/17-18/95										
Q-5986	Station 1	4/18-19/95	0.14	0.0001	19.77	0.012	3.86	0.002	ND	--	ND	--
Q-5987	Station 2	4/18-19/95										
Q-5988	Station 3	4/18-19/95	0.39	0.0002	98.49	0.059	12.08	0.007	63.41	0.038	4.29	0.003
Q-5989	Station 4	4/18-19/95										
Q-5990	Station 1	4/19-20/95	0.71	0.0005	16.77	0.012	3.68	0.003	ND	--	ND	--
Q-5991	Station 2	4/19-20/95	0.39	0.0003	102.00	0.076	8.97	0.007	56.14	0.042	18.48	0.014
Q-5992	Station 3	4/19-20/95										
Q-5993	Station 4	4/19-20/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-5994	Station 1	4/20-21/95	71800	1500	1510	47.57	19.08	0.013	87.97	0.058	ND	--
Q-5995	Station 2	4/20-21/95	76200	1530	1499	50.84						
Q-5996/c	Station 3	4/20-21/95	38500	--	--	--						
Q-5997	Station 4	4/20-21/95	94700	1510	1930	49.06	25.06	0.013	213.30	0.110	0.47	0.0002
--	--	4/21/95	Previous sampling period extended to cover work during morning of 4/21/95.									
Q-5998	Station 1	4/24-25/95	63300	1480	1627	38.91	12.28	0.008	52.88	0.033	0.34	0.0002
Q-5999	Station 2	4/24-25/95	107900	1475	1447	74.59						
Q-6000	Station 3	4/24-25/95	232800	1485	1482	157.13	62.65	0.042	827.00	0.558	1.76	0.0012
Q-6001	Station 4	4/24-25/95	172600	1495	1914	90.20						
Q-6002/c	Station 1	4/25-26/95	71500	1515	1492	47.93						
Q-6003/c	Station 2	4/25-26/95	148000	1515	1486	99.60						
Q-6004/c,e	Station 3	4/25-26/95	177600	--	--	--						
Q-6005/c	Station 4	4/25-26/95	172400	1505	2081	82.83						
Q-0439	Station 1	4/26-27/95	29300	1345	1331	22.01	10.53	0.008	34.84	0.026	ND	--
Q-0440	Station 2	4/26-27/95	34900	1345	1326	26.32						
Q-0441	Station 3	4/26-27/95	51000	1340	1456	35.02	12.78	0.009	128.60	0.088	ND	--
Q-0442	Station 4	4/26-27/95	58200	1340	1759	33.09						
Q-0443/c	Station 1	4/27-28/95	21100	1360	1349	15.64						
Q-0444/c	Station 2	4/27-28/95	25200	1370	1252	20.13						
Q-0445/c	Station 3	4/27-28/95	36400	1375	1460	24.94						
Q-0446/c	Station 4	4/27-28/95	26200	1390	1829	14.33						
--	--	4/28/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	--	--	--	--	16.29	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	19.74	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	25.56	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	7.77	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	7.52	--	4.76	--	ND	--

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-5994	Station 1	4/20-21/95	0.22	0.0001	18.75	0.012	3.96	0.003	ND	--	ND	--
Q-5995	Station 2	4/20-21/95										
Q-5996/e/	Station 3	4/20-21/95										
Q-5997	Station 4	4/20-21/95	0.35	0.0002	89.97	0.047	9.07	0.005	36.09	0.019	ND	--
--	--	4/21/95	Previous sampling period extended to cover work during morning of 4/21/95.									
Q-5998	Station 1	4/24-25/95	0.19	0.0001	18.17	0.011	5.71	0.004	ND	--	ND	--
Q-5999	Station 2	4/24-25/95										
Q-6000	Station 3	4/24-25/95	1.05	0.0005	318.30	0.166	28.07	0.015	183.00	0.124	20.02	0.014
Q-6001	Station 4	4/24-25/95										
Q-6002/c/	Station 1	4/25-26/95										
Q-6003/c/	Station 2	4/25-26/95										
Q-6004/c,e/	Station 3	4/25-26/95										
Q-6005/c/	Station 4	4/25-26/95										
Q-0439	Station 1	4/26-27/95	0.08	0.00006	12.18	0.009	4.21	0.003	ND	--	ND	--
Q-0440	Station 2	4/26-27/95										
Q-0441	Station 3	4/26-27/95	0.20	0.00014	49.37	0.034	12.76	0.009	22.56	0.015	8.49	0.006
Q-0442	Station 4	4/26-27/95										
Q-0443/b/	Station 1	4/27-28/95										
Q-0444/b/	Station 2	4/27-28/95										
Q-0445/b/	Station 3	4/27-28/95										
Q-0446/b/	Station 4	4/27-28/95										
--	--	4/28/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	0.34	--	ND	--	4.76	--	ND	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0447/a/	Station 1	5/1-2/95	22100	1380	1278	17.30						
Q-0448/a/	Station 2	5/1-2/95	27500	1385	1577	17.43						
Q-0449/a/	Station 3	5/1-2/95	41800	1390	1674	24.97						
Q-0450/a/	Station 4	5/1-2/95	28800	1395	2078	13.86						
Q-0451	Station 1	5/2-3/95	51200	1565	1798	28.48	26.31	0.015	108.50	0.060	ND (0.25)	--
Q-0452	Station 2	5/2-3/95	68500	1560	1564	43.79						
Q-0453	Station 3	5/2-3/95	158800	1555	1753	90.58	55.39	0.032	531.30	0.303	0.87	0.0005
Q-0454	Station 4	5/2-3/95	136700	1550	2258	60.54						
Q-0455	Station 1	5/3-4/95	65200	1275	1466	44.46	31.08	0.021	179.20	0.122	0.33	0.0002
Q-0456	Station 2	5/3-4/95	97400	1275	1280	76.10						
Q-0457	Station 3	5/3-4/95	146900	1275	1439	102.08	58.39	0.041	508.80	0.354	0.93	0.0006
Q-0458	Station 4	5/3-4/95	137300	1285	1911	71.84						
Q-0459/a/	Station 1	5/4/95	26700	420	475	56.23						
Q-0460/a/	Station 2	5/4/95	28300	415	418	67.75						
Q-0461/a/	Station 3	5/4/95	39300	410	464	84.70						
Q-0462/a/	Station 4	5/4/95	40000	405	592	67.54						
Q-0463	Station 1	5/5/95	78700	410	472	166.77	31.83	0.067	135.60	0.287	ND (0.25)	--
Q-0464	Station 2	5/5/95	198700	405	407	488.35						
Q-0465	Station 3	5/5/95	255500	405	457	558.52	101.50	0.222	1123.00	2.455	1.98	0.0043
Q-0466	Station 4	5/5/95	220300	415	606	363.71						
Q-0467/a/	Station 1	5/8/95	25200	460	540	46.70						
Q-0468/a/	Station 2	5/8/95	17500	470	522	33.52						
Q-0469/a/	Station 3	5/8/95	39800	480	542	73.44						
Q-0470/a/	Station 4	5/8/95	116700	485	708	164.93						
Q-0471/a/	Station 1	5/9/95	21400	440	495	43.21						
Q-0472/a/	Station 2	5/9/95	22200	400	380	58.50						
Q-0473/a/	Station 3	5/9/95	21500	445	501	42.89						
Q-0474/a/	Station 4	5/9/95	24900	455	689	36.17						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-0447/a/	Station 1	5/1-2/95										
Q-0448/a/	Station 2	5/1-2/95										
Q-0449/a/	Station 3	5/1-2/95										
Q-0450/a/	Station 4	5/1-2/95										
Q-0451	Station 1	5/2-3/95	0.16	0.0001	11.88	0.007	4.26	0.002	4.51	0.003	ND (0.9398)	--
Q-0452	Station 2	5/2-3/95										
Q-0453	Station 3	5/2-3/95	0.82	0.0005	201.00	0.115	18.35	0.010	100.00	0.057	11.28	0.006
Q-0454	Station 4	5/2-3/95										
Q-0455	Station 1	5/3-4/95	0.16	0.0001	14.59	0.010	12.41	0.008	4.76	0.003	ND (0.9398)	--
Q-0456	Station 2	5/3-4/95										
Q-0457	Station 3	5/3-4/95	0.77	0.0005	184.20	0.128	15.54	0.011	89.22	0.062	5.33	0.004
Q-0458	Station 4	5/3-4/95										
Q-0459/a/	Station 1	5/4/95										
Q-0460/a/	Station 2	5/4/95										
Q-0461/a/	Station 3	5/4/95										
Q-0462/a/	Station 4	5/4/95										
Q-0463	Station 1	5/5/95	0.49	0.0010	48.62	0.103	8.50	0.018	9.02	0.019	ND (0.9398)	--
Q-0464	Station 2	5/5/95										
Q-0465	Station 3	5/5/95	1.77	0.0039	558.90	1.222	43.36	0.095	234.60	0.513	17.86	0.039
Q-0466	Station 4	5/5/95										
Q-0467/a/	Station 1	5/8/95										
Q-0468/a/	Station 2	5/8/95										
Q-0469/a/	Station 3	5/8/95										
Q-0470/a/	Station 4	5/8/95										
Q-0471/a/	Station 1	5/9/95										
Q-0472/a/	Station 2	5/9/95										
Q-0473/a/	Station 3	5/9/95										
Q-0474/a/	Station 4	5/9/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (μg)	Run Time (minutes)	Corrected Sample Volume (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
Q-0475	Station 1	5/10/95	56500	460	529	106.85	27.07	0.051	141.30	0.267	0.37	0.0007
Q-0476	Station 2	5/10/95	29500	460	486	60.70						
Q-0488	Station 3	5/10/95	42200	460	609	69.28						
Q-0489	Station 4	5/10/95	73800	475	720	102.54	25.31	0.035	255.60	0.355	0.65	0.0009
Q-0477	Station 1	5/11/95	38800	450	518	74.96	30.58	0.059	253.10	0.489	0.38	0.0007
Q-0478	Station 2	5/11/95	48600	445	470	103.30						
Q-0479	Station 3	5/11/95	55900	445	546	102.39						
Q-0480	Station 4	5/11/95	61200	445	662	92.47	17.79	0.027	295.70	0.447	0.55	0.0008
--	--	5/12/95	No sampling. Scheduled day off for contractor.									
Q-0481/a/	Station 1	5/15/95	10100	420	380	26.59						
Q-0482/a/	Station 2	5/15/95	17300	420	434	39.86						
Q-0483/a/	Station 3	5/15/95	23600	425	481	49.06						
Q-0484/a/	Station 4	5/15/95	24800	435	649	38.23						
Q-0485	Station 1	5/16/95	18500	250	272	68.04	6.02	0.022	148.60	0.546	ND (0.25)	--
Q-0486	Station 2	5/16/95	54000	485	515	104.81	21.30	0.041	241.30	0.468	0.28	0.0005
Q-0487	Station 3	5/16/95	53000	490	580	91.40						
Q-0490	Station 4	5/16/95	41000	505	755	54.32						
Q-0491	Station 1	5/17/95	23400	435	423	55.27	8.02	0.019	248.60	0.587	0.28	0.0007
Q-0492	Station 2	5/17/95	21200	440	512	41.37						
Q-0493	Station 3	5/17/95	46400	450	530	87.49	14.79	0.028	197.00	0.371	0.69	0.0013
Q-0494	Station 4	5/17/95	29600	450	670	44.20						

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0475	Station 1	5/10/95	0.24	0.0005	31.58	0.060	23.53	0.044	13.78	0.026	ND (0.9398)	--
Q-0476	Station 2	5/10/95										
Q-0488	Station 3	5/10/95										
Q-0489	Station 4	5/10/95	0.45	0.0006	88.72	0.123	21.30	0.030	49.37	0.069	7.83	0.011
Q-0477	Station 1	5/11/95	0.22	0.0004	15.49	0.030	3.41	0.007	4.26	0.008	ND (0.9398)	--
Q-0478	Station 2	5/11/95										
Q-0479	Station 3	5/11/95										
Q-0480	Station 4	5/11/95	0.47	0.0007	103.50	0.156	11.68	0.018	51.63	0.078	6.27	0.009
--	--	5/12/95	No sampling. Scheduled day off for contractor.									
Q-0481/a/	Station 1	5/15/95										
Q-0482/a/	Station 2	5/15/95										
Q-0483/a/	Station 3	5/15/95										
Q-0484/a/	Station 4	5/15/95										
Q-0485	Station 1	5/16/95	0.08	0.0003	5.14	0.019	1.33	0.005	2.51	0.009	ND (0.9398)	--
Q-0486	Station 2	5/16/95	0.27	0.0005	67.67	0.131	5.71	0.011	47.12	0.091	5.95	0.012
Q-0487	Station 3	5/16/95										
Q-0490	Station 4	5/16/95										
Q-0491	Station 1	5/17/95	0.08	0.0002	4.59	0.011	1.65	0.004	2.51	0.006	ND (0.9398)	--
Q-0492	Station 2	5/17/95										
Q-0493	Station 3	5/17/95	0.28	0.0005	42.35	0.080	9.80	0.018	30.58	0.058	6.58	0.012
Q-0494	Station 4	5/17/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0495/a/	Station 1	5/18/95	39800	450	447	89.13						
Q-0496/a/	Station 2	5/18/95	38900	470	496	78.37						
Q-0497/a/	Station 3	5/18/95	55200	480	565	97.74						
Q-0498/a/	Station 4	5/18/95	54900	485	735	74.74						
Q-0499	Station 1	5/19/95	46300	425	423	109.34	13.53	0.032	102.30	0.242	ND (0.25)	--
Q-0500	Station 2	5/19/95	40800	415	440	92.70						
Q-0774	Station 3	5/19/95	54600	415	531	102.80						
Q-0775	Station 4	5/19/95	151500	415	619	244.69	51.38	0.083	278.20	0.449	0.80	0.0013
Q-0806/a/	Station 1	5/22/95	30200	425	422	71.55						
Q-0831/a/	Station 2	5/22/95	35700	415	439	81.39						
Q-0832/a/	Station 3	5/22/95	41600	440	507	82.00						
Q-0833/a/	Station 4	5/22/95	110100	455	677	162.73						
Q-0834	Station 1	5/23/95	41400	445	452	91.50	9.27	0.020	38.34	0.085	ND (0.25)	--
Q-0835	Station 2	5/23/95	123800	455	482	256.65						
Q-0836	Station 3	5/23/95	368500	460	532	692.73	117.80	0.221	1529.00	2.874	2.86	0.005
Q-0837	Station 4	5/23/95	432400	470	687	629.05	152.60	0.222	2098.00	3.052	4.04	0.006
Q-0838	Station 1	5/24/95	45200	465	462	97.76	8.77	0.019	122.10	0.264	ND (0.25)	--
Q-0839	Station 2	5/24/95	75800	470	497	152.39						
Q-0840	Station 3	5/24/95	142600	475	537	265.69	41.85	0.078	518.80	0.967	0.92	0.002
Q-0841	Station 4	5/24/95	128800	480	701	183.79						
Q-0842/a/	Station 1	5/25/95	28800	470	467	61.65						
Q-0843/a/	Station 2	5/25/95	47800	465	492	97.16						
Q-0844/a/	Station 3	5/25/95	110200	465	537	205.35						
Q-0845/a/	Station 4	5/25/95	126400	470	713	177.26						
--	--	5/26/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	--	--	--	--	10.28	--	2.26	--	ND (0.25)	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-0495/a/	Station 1	5/18/95										
Q-0496/a/	Station 2	5/18/95										
Q-0497/a/	Station 3	5/18/95										
Q-0498/a/	Station 4	5/18/95										
Q-0499	Station 1	5/19/95	0.22	0.0005	13.21	0.031	4.64	0.011	4.26	0.010	ND (0.9398)	--
Q-0500	Station 2	5/19/95										
Q-0774	Station 3	5/19/95										
Q-0775	Station 4	5/19/95	0.47	0.0008	87.21	0.141	16.47	0.027	46.36	0.075	6.58	0.011
Q-0806/a/	Station 1	5/22/95										
Q-0831/a/	Station 2	5/22/95										
Q-0832/a/	Station 3	5/22/95										
Q-0833/a/	Station 4	5/22/95										
Q-0834	Station 1	5/23/95	0.11	0.0002	10.38	0.023	2.08	0.005	3.01	0.007	ND (0.9398)	--
Q-0835	Station 2	5/23/95										
Q-0836	Station 3	5/23/95	2.53	0.0048	694.20	1.305	55.89	0.105	330.80	0.622	31.01	0.058
Q-0837	Station 4	5/23/95	3.89	0.0057	1028.00	1.496	94.23	0.137	411.00	0.598	32.37	0.047
Q-0838	Station 1	5/24/95	0.09	0.0002	5.59	0.012	3.48	0.008	3.26	0.007	ND (0.9398)	--
Q-0839	Station 2	5/24/95										
Q-0840	Station 3	5/24/95	0.91	0.0017	212.50	0.396	17.92	0.033	101.20	0.189	14.72	0.027
Q-0841	Station 4	5/24/95										
Q-0842/a/	Station 1	5/25/95										
Q-0843/a/	Station 2	5/25/95										
Q-0844/a/	Station 3	5/25/95										
Q-0845/a/	Station 4	5/25/95										
--	--	5/26/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	ND (.0125)	--	0.40	--	1.08	--	ND (2.506)	--	ND (0.9398)	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0846	Station 1	5/30/95	18700	450	507	36.88	11.28	0.022	49.87	0.098	ND (.2506)	--
Q-0847	Station 2	5/30/95	53200	450	462	115.15						
Q-0848	Station 3	5/30/95	82800	455	461	179.61						
Q-0849	Station 4	5/30/95	105600	455	575	183.65	29.57	0.051	333.30	0.580	0.78	0.001
Q-0850	Station 1	5/31/95	28600	475	521	54.89	17.79	0.034	60.40	0.116	ND (.2506)	--
Q-0851	Station 2	5/31/95	40000	485	495	80.81						
Q-0852/b/	Station 3	5/31/95	42200	--	--	--						
Q-0853	Station 4	5/31/95	214900	490	622	345.50	60.90	0.098	438.60	0.705	1.38	0.0022
Q-0854/a/	Station 1	6/1/95	46900	455	577	81.28						
Q-0855/a/	Station 2	6/1/95	84400	460	484	174.38						
Q-0856/a,b/	Station 3	6/1/95	42700	467	461	92.62						
Q-0857/a/	Station 4	6/1/95	131200	464	598	219.40						
Q-0858	Station 1	6/2/95	31800	400	488	65.16	12.28	0.025	132.60	0.272	ND (.2506)	--
Q-0859	Station 2	6/2/95	44300	400	420	105.48						
Q-0860/b/	Station 3	6/2/95	40300	--	--	--						
Q-0861	Station 4	6/2/95	79000	400	510	154.90	26.06	0.051	153.60	0.301	0.29	0.0006
Q-0862	Station 1	6/5/95	47100	455	588	80.10	15.04	0.026	54.13	0.092	ND (.2506)	--
Q-0863	Station 2	6/5/95	78500	445	453	173.29	22.05	0.049	142.90	0.315	ND (.2506)	--
Q-0864	Station 3	6/5/95	72500	427	456	158.99						
Q-0865	Station 4	6/5/95	56500	443	566	99.82						
Q-0866	Station 1	6/6/95	33000	425	556	59.35	11.78	0.021	49.12	0.088	ND (.2506)	--
Q-0867	Station 2	6/6/95	36000	425	444	81.08						
Q-0868	Station 3	6/6/95	37200	435	466	79.83	8.27	0.018	73.68	0.158	ND (.2506)	--
Q-0869	Station 4	6/6/95	35400	430	556	63.67						
--	--	6/7/95	No sampling. Sampling media for TSP/metals not available due to laboratory error.									
Q-0870	Station 1	6/8/95	55500	515	667	83.21	17.04	0.026	75.44	0.113	ND (.2506)	--
Q-0886	Station 2	6/8/95	40400	460	441	91.61						
Q-0887	Station 3	6/8/95	60300	460	492	122.56	16.29	0.033	116.80	0.237	0.47	0.001
Q-0888	Station 4	6/8/95	63300	460	566	111.84						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0846	Station 1	5/30/95	0.12	0.0002	13.16	0.0260	2.58	0.005	ND (2.506)	--	ND (0.9398)	--
Q-0847	Station 2	5/30/95										
Q-0848	Station 3	5/30/95										
Q-0849	Station 4	5/30/95	0.91	0.0016	132.30	0.2301	16.24	0.028	66.66	0.116	16.23	0.028
Q-0850	Station 1	5/31/95	0.14	0.0003	14.69	0.028	3.99	0.008	2.76	0.005	ND (0.9398)	--
Q-0851	Station 2	5/31/95										
Q-0852/b/	Station 3	5/31/95										
Q-0853	Station 4	5/31/95	0.74	0.0012	211.00	0.339	23.78	0.038	78.44	0.126	12.37	0.020
Q-0854/a/	Station 1	6/1/95										
Q-0855/a/	Station 2	6/1/95										
Q-0856/a,b/	Station 3	6/1/95										
Q-0857/a/	Station 4	6/1/95										
Q-0858	Station 1	6/2/95	0.24	0.0005	11.53	0.024	2.36	0.005	3.01	0.006	ND (0.9398)	--
Q-0859	Station 2	6/2/95										
Q-0860/b/	Station 3	6/2/95										
Q-0861	Station 4	6/2/95	0.32	0.0006	41.53	0.081	6.07	0.012	24.81	0.049	2.37	0.005
Q-0862	Station 1	6/5/95	0.13	0.0002	19.15	0.033	3.01	0.005	4.51	0.008	ND (0.9398)	--
Q-0863	Station 2	6/5/95	0.29	0.0006	65.41	0.144	5.34	0.012	28.07	0.062	9.24	0.020
Q-0864	Station 3	6/5/95										
Q-0865	Station 4	6/5/95										
Q-0866	Station 1	6/6/95	0.11	0.0002	8.77	0.016	1.33	0.002	3.01	0.005	ND (0.9398)	--
Q-0867	Station 2	6/6/95										
Q-0868	Station 3	6/6/95	0.12	0.0003	29.57	0.063	3.61	0.008	11.28	0.024	ND (0.9398)	--
Q-0869	Station 4	6/6/95										
--	--	6/7/95	No sampling. Sampling media for TSP/metals not available due to laboratory error.									
Q-0870	Station 1	6/8/95	0.20	0.0003	18.85	0.028	7.14	0.011	6.77	0.010	ND (0.9398)	--
Q-0886	Station 2	6/8/95										
Q-0887	Station 3	6/8/95	0.21	0.0004	51.13	0.104	25.31	0.051	24.06	0.049	3.13	0.006
Q-0888	Station 4	6/8/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (μg)	Run Time (minutes)	Corrected Sample Volume (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
--	--	6/9/95	No sampling. Scheduled day off for contractor.									
Q-0889/a/	Station 1	6/12/95	33400	500	624	53.53						
Q-0890/a/	Station 2	6/12/95	27100	500	492	55.08						
Q-0891/a/	Station 3	6/12/95	43500	505	528	82.39						
Q-0892/a,c/	Station 4	6/12/95	45200	500	616	73.38						
Q-0893	Station 1	6/13/95	66600	487	601	110.82	31.83	0.053	96.99	0.161	ND (.2506)	--
Q-0894	Station 2	6/13/95	83600	491	473	176.74						
Q-0895	Station 3	6/13/95	100600	491	538	186.99	41.60	0.077	285.70	0.531	0.53	0.001
Q-0896	Station 4	6/13/95	59100	495	606	97.52						
Q-0897/a/	Station 1	6/14/95	15700	478	597	26.30						
Q-0898/a/	Station 2	6/14/95	14400	487	473	30.44						
Q-0899/a/	Station 3	6/14/95	25200	493	501	50.30						
Q-0900/a/	Station 4	6/14/95	17700	495	616	28.73						
Q-0901	Station 1	6/15/95	40500	478	592	68.41	16.54	0.028	53.88	0.091	ND (.2506)	--
Q-0902	Station 2	6/15/95	151500	487	480	315.63	47.12	0.098	388.50	0.809	0.73	0.002
Q-0903	Station 3	6/15/95	70600	498	521	135.51						
Q-0904	Station 4	6/15/95	84500	407	517	163.44						
Blank /d/	--	--	--	--	--	--	4.51	--	ND (1.253	--	ND (.2506)	--
--	--	6/16/95	No sampling. No activities in exclusion zone due to rain.									
--	--	6/19/95	No sampling. Power outage over entire site.									
--	--	6/20/95	No sampling. Power outage over entire site.									
--	--	6/21/95	No sampling. Power outage over entire site.									
--	--	6/22/95	No sampling. Power outage over entire site.									
--	--	6/23/95	No sampling. Scheduled day off for contractor.									

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
--	--	6/9/95	No sampling. Scheduled day off for contractor.									
Q-0889/a/	Station 1	6/12/95										
Q-0890/a/	Station 2	6/12/95										
Q-0891/a/	Station 3	6/12/95										
Q-0892/a,c/	Station 4	6/12/95										
Q-0893	Station 1	6/13/95	0.21	0.0004	32.58	0.054	6.87	0.011	5.01	0.008	ND (0.9398)	--
Q-0894	Station 2	6/13/95										
Q-0895	Station 3	6/13/95	0.41	0.0008	133.10	0.247	12.03	0.022	55.64	0.103	9.34	0.017
Q-0896	Station 4	6/13/95										
Q-0897/a/	Station 1	6/14/95										
Q-0898/a/	Station 2	6/14/95										
Q-0899/a/	Station 3	6/14/95										
Q-0900/a/	Station 4	6/14/95										
Q-0901	Station 1	6/15/95	0.15	0.0002	17.97	0.030	8.52	0.014	2.51	0.004	ND (0.9398)	--
Q-0902	Station 2	6/15/95	0.78	0.0016	223.30	0.465	15.89	0.033	76.94	0.160	12.37	0.026
Q-0903	Station 3	6/15/95										
Q-0904	Station 4	6/15/95										
Blank /d/	--	--	ND (.0125)	--	ND (.2506)	--	1.15	--	ND (2.506)	--	ND (0.9398)	--
--	--	6/16/95	No sampling. No activities in exclusion zone due to rain.									
--	--	6/19/95	No sampling. Power outage over entire site.									
--	--	6/20/95	No sampling. Power outage over entire site.									
--	--	6/21/95	No sampling. Power outage over entire site.									
--	--	6/22/95	No sampling. Power outage over entire site.									
--	--	6/23/95	No sampling. Scheduled day off for contractor.									

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0905	Station 1	6/26/95	34200	453	590	57.92	191.50	0.324	191.20	0.324	0.27	0.0005
Q-0906	Station 2	6/26/95	42900	450	467	91.84	60.40	0.129	118.80	0.254	ND (.2506)	--
Q-0907	Station 3	6/26/95	30000	452	493	60.82						
Q-0908	Station 4	6/26/95	40900	448	572	71.50						
Q-0909/a/	Station 1	6/27/95	29400	466	595	49.41						
Q-0912/a/	Station 2	6/27/95	28800	466	488	58.99						
Q-0913/a/	Station 3	6/27/95	27300	469	498	54.82						
Q-0914/a/	Station 4	6/27/95	40500	469	592	68.46						
Q-0915/a/	Station 1	6/28/95	24900	438	559	44.58						
Q-0916/a/	Station 2	6/28/95	37300	438	453	82.33						
Q-0917/a/	Station 3	6/28/95	26000	438	470	55.27						
Q-0918/a/	Station 4	6/28/95	34700	439	570	60.92						
Q-0919	Station 1	6/29/95	29500	451	575	51.35	11.78	0.021	275.70	0.480	ND (.2506)	--
Q-0920	Station 2	6/29/95	87800	447	456	192.35	43.61	0.096	421.00	0.922	0.87	0.002
Q-0921	Station 3	6/29/95	49200	447	468	105.23						
Q-0922	Station 4	6/29/95	39800	452	580	68.60						
Q-0975	Station 1	6/30/95	17700	258	328	53.95	5.26	0.016	92.98	0.283	ND (.2506)	--
Q-0976	Station 2	6/30/95	72800	258	263	276.84	28.07	0.107	265.70	1.010	0.46	0.002
Q-0977	Station 3	6/30/95	24000	261	279	85.87						
Q-0978	Station 4	6/30/95	12800	262	332	38.51						
Q-0979/a/	Station 1	7/3/95	5500	213	263	20.93						
Q-0980/a/	Station 2	7/3/95	17200	204	208	82.88						
Q-0981/a/	Station 3	7/3/95	9900	204	215	45.98						
Q-0982/a/	Station 4	7/3/95	7200	203	242	29.77						
--	--	7/4/95	No sampling. Holiday.									
Q-0983/a/	Station 1	7/5/95	24100	460	569	42.38						
Q-0984/a/	Station 2	7/5/95	28800	458	467	61.70						
Q-0985/a/	Station 3	7/5/95	60100	466	493	121.98						
Q-0986/a/	Station 4	7/5/95	41500	473	588	70.55						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-0905	Station 1	6/26/95	0.09	0.0002	13.96	0.024	3.66	0.006	149.90	0.254	5.17	0.009
Q-0906	Station 2	6/26/95	0.11	0.0002	32.33	0.069	3.63	0.008	17.04	0.036	7.52	0.016
Q-0907	Station 3	6/26/95										
Q-0908	Station 4	6/26/95										
Q-0909/a/	Station 1	6/27/95										
Q-0912/a/	Station 2	6/27/95										
Q-0913/a/	Station 3	6/27/95										
Q-0914/a/	Station 4	6/27/95										
Q-0915/a/	Station 1	6/28/95										
Q-0916/a/	Station 2	6/28/95										
Q-0917/a/	Station 3	6/28/95										
Q-0918/a/	Station 4	6/28/95										
Q-0919	Station 1	6/29/95	0.12	0.0002	14.41	0.025	2.00	0.003	ND (2.506)	--	ND (0.9398)	--
Q-0920	Station 2	6/29/95	1.77	0.0039	169.40	0.371	13.33	0.029	73.18	0.160	9.12	0.020
Q-0921	Station 3	6/29/95										
Q-0922	Station 4	6/29/95										
Q-0975	Station 1	6/30/95	ND(.0125)	--	6.27	0.019	1.06	0.003	ND (2.506)	--	ND (0.9398)	--
Q-0976	Station 2	6/30/95	0.41	0.0016	122.60	0.466	10.15	0.039	63.16	0.240	8.71	0.033
Q-0977	Station 3	6/30/95										
Q-0978	Station 4	6/30/95										
Q-0979/a/	Station 1	7/3/95										
Q-0980/a/	Station 2	7/3/95										
Q-0981/a/	Station 3	7/3/95										
Q-0982/a/	Station 4	7/3/95										
--	--	--	No sampling. Holiday.									
Q-0983/a/	Station 1	7/5/95										
Q-0984/a/	Station 2	7/5/95										
Q-0985/a/	Station 3	7/5/95										
Q-0986/a/	Station 4	7/5/95										

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0987	Station 1	7/6/95	30800	436	545	56.50	12.78	0.023	62.90	0.115	ND (.2506)	--
Q-0988	Station 2	7/6/95	54200	433	437	124.05						
Q-0989	Station 3	7/6/95	60800	439	471	129.10	21.55	0.046	230.60	0.490	ND (.2506)	--
Q-0990	Station 4	7/6/95	58100	446	556	104.55						
--	--	7/7/95	No sampling. Scheduled day off for contractor.									
Q-0992	Station 1	7/10/95	23900	495	585	40.88	5.76	0.010	44.61	0.076	ND (.2506)	---
Q-0993	Station 2	7/10/95	33400	480	563	59.33						
Q-0994	Station 3	7/10/95	25800	480	573	45.00						
Q-0995	Station 4	7/10/95	79300	395	464	171.03	25.31	0.055	144.60	0.312	0.45	0.001
Q-0996/a/	Station 1	7/11/95	30500	423	500	61.00						
Q-0997/a/	Station 2	7/11/95	20300	414	483	41.99						
Q-0998/a/	Station 3	7/11/95	24800	410	493	50.34						
Q-0999/a/	Station 4	7/11/95	61700	407	478	129.03						
Q-1000	Station 1	7/12/95	14900	440	521	28.61	4.01	0.008	30.58	0.059	ND (.2506)	---
Q-1001	Station 2	7/12/95	43500	448	529	82.24						
Q-1002	Station 3	7/12/95	29200	450	541	53.93						
Q-1003	Station 4	7/12/95	63800	452	532	119.97	19.80	0.037	164.20	0.309	0.45	0.001
Q-1004/a/	Station 1	7/13/95	23500	429	503	46.73						
Q-1005/a/	Station 2	7/13/95	45100	429	501	89.99						
Q-1006/a/	Station 3	7/13/95	27800	371	442	62.89						
Q-1007/a/	Station 4	7/13/95	45600	438	514	88.66						
Q-1008	Station 1	7/14/95	30800	426	496	62.11	15.04	0.030	46.87	0.095	ND (.2506)	---
Q-1009	Station 2	7/14/95	39600	433	501	79.04						
Q-1010	Station 3	7/14/95	43000	433	515	83.51	23.06	0.045	70.67	0.137	0.40	0.001
Q-1011	Station 4	7/14/95	43400	439	508	85.37						
Q-1012/b/	Station 1	7/17/95	20600	400	475	43.34	8.52	0.018	33.33	0.070	ND (.2506)	---
Q-1013/b/	Station 2	7/17/95	31000	341	401	77.25						
Q-1014/b/	Station 3	7/17/95	26800	344	415	64.51						
Q-1015/b/	Station 4	7/17/95	75200	366	431	174.59	27.07	0.063	206.50	0.479	0.68	0.002

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0987	Station 1	7/6/95	0.06	0.0001	13.46	0.025	2.88	0.005	3.76	0.007	ND (0.9398)	--
Q-0988	Station 2	7/6/95										
Q-0989	Station 3	7/6/95	0.24	0.0005	116.00	0.246	10.75	0.023	51.13	0.109	12.28	0.026
Q-0990	Station 4	7/6/95										
--	--	7/7/95	No sampling. Scheduled day off for contractor.									
Q-0992	Station 1	7/10/95	0.10	0.0002	11.20	0.019	1.54	0.003	ND (2.506)	--	1.19	0.002
Q-0993	Station 2	7/10/95										
Q-0994	Station 3	7/10/95										
Q-0995	Station 4	7/10/95	0.24	0.0005	71.18	0.154	9.02	0.019	21.05	0.045	1.59	0.003
Q-0996/a/	Station 1	7/11/95										
Q-0997/a/	Station 2	7/11/95										
Q-0998/a/	Station 3	7/11/95										
Q-0999/a/	Station 4	7/11/95										
Q-1000	Station 1	7/12/95	ND (.0125)	--	5.09	0.010	ND (.5012)	---	ND (2.506)	--	1.98	0.004
Q-1001	Station 2	7/12/95										
Q-1002	Station 3	7/12/95										
Q-1003	Station 4	7/12/95	0.21	0.0004	65.41	0.123	7.84	0.015	24.31	0.046	2.78	0.005
Q-1004/a/	Station 1	7/13/95										
Q-1005/a/	Station 2	7/13/95										
Q-1006/a/	Station 3	7/13/95										
Q-1007/a/	Station 4	7/13/95										
Q-1008	Station 1	7/14/95	0.26	0.0005	165.40	0.334	20.63	0.042	ND (2.506)	--	1.59	0.003
Q-1009	Station 2	7/14/95										
Q-1010	Station 3	7/14/95	0.30	0.0006	72.43	0.141	21.00	0.041	7.02	0.014	1.98	0.004
Q-1011	Station 4	7/14/95										
Q-1012/b/	Station 1	7/17/95	1.61	0.0034	11.75	0.025	16.32	0.034	13.03	0.027	1.59	0.003
Q-1013/b/	Station 2	7/17/95										
Q-1014/b/	Station 3	7/17/95										
Q-1015/b/	Station 4	7/17/95	0.40	0.0009	90.47	0.210	40.60	0.094	34.84	0.081	4.35	0.010

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1016/a,b/	Station 1	7/18/95	16600	356	421	39.39						
Q-1017/a,b/	Station 2	7/18/95	21800	338	396	55.10						
Q-1018/a,b/	Station 3	7/18/95	19900	333	399	49.92						
Q-1019/a,b/	Station 4	7/18/95	32600	328	385	84.76						
Q-1020/a/	Station 1	7/19/95	11600	411	490	23.67						
Q-1021/a/	Station 2	7/19/95	32600	418	491	66.39						
Q-1022/a/	Station 3	7/19/95	18100	417	500	36.19						
Q-1023/a/	Station 4	7/19/95	26400	423	498	53.03						
Q-1024	Station 1	7/20/95	14300	460	549	26.07	4.26	0.008	205.80	0.375	ND (.2506)	--
Q-1025/b/	Station 2	7/20/95	35400	423	499	70.91	12.53	0.025	166.70	0.334	0.27	0.001
Q-1026/b/	Station 3	7/20/95	18000	429	520	34.64						
Q-1027	Station 4	7/20/95	23000	466	550	41.82						
--	--	7/21/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	--	--	--	--	6.27	--	ND (1.253	--	ND (.2506)	--
Blank /c/	--	--	--	--	--	--	6.02	--	ND (1.253	--	ND (.2506)	--
Q-1028	Station 1	7/24/95	36200	491	580	62.36	14.03	0.024	54.89	0.095	0.43	0.0007
Q-1029	Station 2	7/24/95	77100	489	574	134.42						
Q-1030	Station 3	7/24/95	46500	487	586	79.32						
Q-1031	Station 4	7/24/95	84900	490	577	147.20	25.56	0.044	222.50	0.386	0.70	0.0012
Q-1032/f/	Station 1	7/25/95	13800	407	485	28.47						
Q-1033/f/	Station 2	7/25/95	15200	414	488	31.18						
Q-1034/f/	Station 3	7/25/95	22600	414	498	45.41						
Q-1035/f/	Station 4	7/25/95	57100	418	492	116.00						
Q-1036/f/	Station 1	7/26/95	23100	417	488	47.31						
Q-1037/f/	Station 2	7/26/95	30300	425	495	61.21						
Q-1038/f/	Station 3	7/26/95	21600	423	504	42.84						
Q-1039/f/	Station 4	7/26/95	30000	429	501	59.83						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1016/a,b/	Station 1	7/18/95										
Q-1017/a,b/	Station 2	7/18/95										
Q-1018/a,b/	Station 3	7/18/95										
Q-1019/a,b/	Station 4	7/18/95										
Q-1020/a/	Station 1	7/19/95										
Q-1021/a/	Station 2	7/19/95										
Q-1022/a/	Station 3	7/19/95										
Q-1023/a/	Station 4	7/19/95										
Q-1024	Station 1	7/20/95	0.02	0.00003	6.87	0.013	1.60	0.003	ND (2.506)	--	1.98	0.004
Q-1025/b/	Station 2	7/20/95	0.18	0.00036	58.39	0.117	5.69	0.011	25.81	0.052	5.95	0.012
Q-1026/b/	Station 3	7/20/95										
Q-1027	Station 4	7/20/95										
--	--	7/21/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	0.05	--	ND (.2506)	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Blank /c/	--	--	0.09	--	0.30	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Q-1028	Station 1	7/24/95	0.96	0.00166	16.44	0.028	3.99	0.007	4.76	0.008	3.13	0.005
Q-1029	Station 2	7/24/95										
Q-1030	Station 3	7/24/95										
Q-1031	Station 4	7/24/95	0.41	0.00071	84.21	0.146	11.68	0.020	35.84	0.062	5.39	0.009
Q-1032/f/	Station 1	7/25/95										
Q-1033/f/	Station 2	7/25/95										
Q-1034/f/	Station 3	7/25/95										
Q-1035/f/	Station 4	7/25/95										
Q-1036/f/	Station 1	7/26/95										
Q-1037/f/	Station 2	7/26/95										
Q-1038/f/	Station 3	7/26/95										
Q-1039/f/	Station 4	7/26/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1040	Station 1	7/27/95	40100	465	544	73.69	19.80	0.036	83.71	0.154	0.31	0.0006
Q-1041	Station 2	7/27/95	79300	470	546	145.16	28.82	0.053	181.70	0.333	0.74	0.0014
Q-1042/b/	Station 3	7/27/95	66000	452	536	123.18						
Q-1043	Station 4	7/27/95	39000	449	521	74.92						
Q-1044	Station 1	7/28/95	25700	475	559	45.99	12.78	0.023	122.10	0.219	0.29	0.0005
Q-1045	Station 2	7/28/95	50400	477	559	90.21	21.30	0.038	187.00	0.335	0.53	0.0010
Q-1046	Station 3	7/28/95	40500	483	580	69.88						
Q-1047	Station 4	7/28/95	46400	488	573	81.04						
Q-1807	Station 1	7/31/95	47200	412	477	99.05	23.56	0.049	56.89	0.119	0.45	0.0010
Q-1808	Station 2	7/31/95	87300	412	474	183.99						
Q-1809	Station 3	7/31/95	79300	415	488	162.55						
Q-1810	Station 4	7/31/95	99400	421	484	205.55	39.35	0.081	250.60	0.518	0.86	0.0018
Q-1811/f/	Station 1	8/1/95	23700	407	477	49.72						
Q-1812/f/	Station 2	8/1/95	50600	404	468	108.06						
Q-1813/f/	Station 3	8/1/95	49600	409	483	102.74						
Q-1814/f/	Station 4	8/1/95	53600	400	468	114.61						
Q-1815/f/	Station 1	8/2/95	19700	446	524	37.61						
Q-1816/f/	Station 2	8/2/95	57900	367	429	135.03						
Q-1817/f/	Station 3	8/2/95	21000	360	430	48.81						
Q-1818/f/	Station 4	8/2/95	24900	350	410	60.78						
Q-1819	Station 1	8/3/95	40400	457	539	74.92	ND(2.506)	--	45.86	0.085	ND (.2506)	--
Q-1820/b/	Station 2	8/3/95	77100	461	540	142.72						
Q-1821/b/	Station 3	8/3/95	28200	460	548	51.50						
Q-1822/b/	Station 4	8/3/95	308200	462	542	568.29	82.45	0.152	714.30	1.317	2.20	0.0041
Q-1824/f/	Station 1	8/7/95	22700	412	485	46.78						
Q-1825/f/	Station 2	8/7/95	69100	411	482	143.37						
--	Station 3	8/7/95	--	--	--	--						
Q-1827/f/	Station 4	8/7/95	49900	403	472	105.78						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1040	Station 1	7/27/95	0.21	0.00039	17.72	0.033	5.69	0.010	5.26	0.010	1.88	0.003
Q-1041	Station 2	7/27/95	0.58	0.00106	71.68	0.131	11.73	0.021	32.83	0.060	8.52	0.016
Q-1042/b/	Station 3	7/27/95										
Q-1043	Station 4	7/27/95										
Q-1044	Station 1	7/28/95	0.29	0.00052	27.07	0.048	2.91	0.005	4.51	0.008	2.66	0.005
Q-1045	Station 2	7/28/95	0.36	0.00065	65.41	0.117	6.19	0.011	30.83	0.055	8.52	0.015
Q-1046	Station 3	7/28/95										
Q-1047	Station 4	7/28/95										
Q-1807	Station 1	7/31/95	0.03	0.00005	18.55	0.039	4.21	0.009	5.51	0.012	2.27	0.005
Q-1808	Station 2	7/31/95										
Q-1809	Station 3	7/31/95										
Q-1810	Station 4	7/31/95	0.76	0.00158	74.68	0.154	10.90	0.023	34.84	0.072	6.96	0.014
Q-1811/f/	Station 1	8/1/95										
Q-1812/f/	Station 2	8/1/95										
Q-1813/f/	Station 3	8/1/95										
Q-1814/f/	Station 4	8/1/95										
Q-1815/f/	Station 1	8/2/95										
Q-1816/f/	Station 2	8/2/95										
Q-1817/f/	Station 3	8/2/95										
Q-1818/f/	Station 4	8/2/95										
Q-1819	Station 1	8/3/95	ND(0.0125)	--	13.16	0.024	2.50	0.005	3.76	0.007	ND(0.9398)	--
Q-1820/b/	Station 2	8/3/95										
Q-1821/b/	Station 3	8/3/95										
Q-1822/b/	Station 4	8/3/95	1.18	0.00217	237.10	0.437	35.09	0.065	127.10	0.234	17.23	0.032
Q-1824/f/	Station 1	8/7/95										
Q-1825/f/	Station 2	8/7/95										
--	Station 3	8/7/95										
Q-1827/f/	Station 4	8/7/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (μg)	Run Time (minutes)	Corrected Sample Volume (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
Q-1828	Station 1	8/8/95	48900	496	575	85.11	13.53	0.024	127.60	0.222	0.61	0.0011
Q-1829	Station 2	8/8/95	43900	500	574	76.52						
Q-1826	Station 3	8/8/95	93200	486	569	163.73	31.83	0.056	216.50	0.380	0.83	0.0015
Q-1830	Station 4	8/8/95	59900	511	587	101.98						
Q-1831	Station 1	8/9/95	48500	463	542	89.42	13.03	0.024	45.61	0.084	0.41	0.0008
Q-1832	Station 2	8/9/95	187100	470	545	343.08	46.11	0.085	466.10	0.855	1.36	0.0025
Q-1833	Station 3	8/9/95	175100	469	553	316.52	47.62	0.086	1108.00	2.003	2.24	0.0041
Q-1834	Station 4	8/9/95	129100	474	549	235.14						
Q-1835/f/	Station 1	8/10/95	34200	456	537	63.69						
Q-1836/f/	Station 2	8/10/95	64700	438	514	125.76						
Q-1837/f/	Station 3	8/10/95	104300	434	517	201.62						
Q-1838/f/	Station 4	8/10/95	49300	428	503	98.07						
Q-1839	Station 1	8/11/95	20300	408	483	42.05	ND(2.506)	--	40.85	0.085	ND(0.2506)	--
Q-1840	Station 2	8/11/95	71300	414	488	146.07						
Q-1841	Station 3	8/11/95	122900	407	485	253.24	28.57	0.059	383.40	0.790	1.04	0.0021
Q-1842	Station 4	8/11/95	75300	403	474	159.03						
Q-1843	Station 1	8/14/95	47300	472	549	86.20	6.27	0.011	92.48	0.169	0.41	0.0007
Q-1844	Station 2	8/14/95	53600	474	551	97.27						
Q-1845	Station 3	8/14/95	64500	469	551	116.99						
Q-1846	Station 4	8/14/95	94400	466	540	174.85	18.55	0.034	295.70	0.548	0.79	0.0015
Q-1847/f/	Station 1	8/15/95	38500	429	505	76.28						
Q-1848/f/	Station 2	8/15/95	45100	429	501	90.06						
Q-1849/f/	Station 3	8/15/95	53200	431	511	104.11						
Q-1850/f/	Station 4	8/15/95	43300	433	505	85.82						
Blank /d/	--	--	--	--	--	--	8.27	--	1.50	--	ND (.2506)	--
Blank /d/	--	--	--	--	--	--	29.32	--	11.03	--	ND (.2506)	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1828	Station 1	8/8/95	0.12	0.00021	63.41	0.110	33.83	0.059	14.79	0.026	4.23	0.007
Q-1829	Station 2	8/8/95										
Q-1826	Station 3	8/8/95	0.46	0.00080	96.24	0.169	134.60	0.236	38.85	0.068	9.34	0.016
Q-1830	Station 4	8/8/95										
Q-1831	Station 1	8/9/95	0.02	0.00003	19.12	0.035	4.26	0.008	5.01	0.009	2.66	0.005
Q-1832	Station 2	8/9/95	0.65	0.00119	263.10	0.482	18.87	0.035	111.50	0.204	26.63	0.049
Q-1833	Station 3	8/9/95	1.13	0.00203	927.30	1.676	23.08	0.042	134.60	0.243	18.80	0.034
Q-1834	Station 4	8/9/95										
Q-1835/f/	Station 1	8/10/95										
Q-1836/f/	Station 2	8/10/95										
Q-1837/f/	Station 3	8/10/95										
Q-1838/f/	Station 4	8/10/95										
Q-1839	Station 1	8/11/95	ND(0.0125)	--	234.30	0.485	2.27	0.005	4.01	0.008	3.05	0.006
Q-1840	Station 2	8/11/95										
Q-1841	Station 3	8/11/95	0.58	0.00120	177.40	0.366	14.86	0.031	79.70	0.164	18.80	0.039
Q-1842	Station 4	8/11/95										
Q-1843	Station 1	8/14/95	0.11	0.00019	105.30	0.192	4.86	0.009	16.29	0.030	5.39	0.010
Q-1844	Station 2	8/14/95										
Q-1845	Station 3	8/14/95										
Q-1846	Station 4	8/14/95	0.42	0.00078	107.80	0.200	12.13	0.022	57.89	0.107	11.65	0.022
Q-1847/f/	Station 1	8/15/95										
Q-1848/f/	Station 2	8/15/95										
Q-1849/f/	Station 3	8/15/95										
Q-1850/f/	Station 4	8/15/95										
Blank /d/	--	--	ND(.0125)	--	ND (.2506)	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Blank /d/	--	--	0.19	--	0.33	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1851/c/	Station 1	8/16/95	42500	449	531	80.02						
Q-1852/c/	Station 2	8/16/95	159900	453	532	300.77						
Q-1858/c/	Station 3	8/16/95	125300	460	547	228.90						
Q-1859/c/	Station 4	8/16/95	94200	470	549	171.68						
Q-1860	Station 1	8/17/95	25200	510	611	41.22	13.78	0.023	55.14	0.090	0.43	0.0007
Q-1861	Station 2	8/17/95	86200	505	593	145.25						
Q-1862	Station 3	8/17/95	183200	507	607	301.68	79.45	0.131	1050.00	1.729	1.96	0.0032
Q-1863	Station 4	8/17/95	25600	509	597	42.87						
Q-1879/d/	Station 1	8/21/95	21100	427	514	41.05						
Q-1880/b,c/	Station 2	8/21/95	61500	365	430	143.05						
Q-1881/b,c/	Station 3	8/21/95	63400	352	424	149.51						
Q-1882/c/	Station 4	8/21/95	97700	394	465	210.15						
Q-1883	Station 1	8/22/95	27800	513	606	45.84	14.03	0.023	71.93	0.119	0.50	0.0008
Q-1884	Station 2	8/22/95	69100	434	507	136.20						
Q-1885	Station 3	8/22/95	106500	422	506	210.55	40.35	0.080	438.60	0.867	0.96	0.0019
Q-1886	Station 4	8/22/95	56100	388	454	123.58						
Q-1887	Station 1	8/23/95	29900	520	616	48.57	9.02	0.015	81.70	0.133	0.39	0.0006
Q-1888	Station 2	8/23/95	122000	524	613	199.06						
Q-1889	Station 3	8/23/95	119400	520	625	191.12						
Q-1890	Station 4	8/23/95	126300	524	616	205.18	42.10	0.068	586.40	0.953	1.29	0.0021
Q-1891	Station 1	8/24/95	24300	507	602	40.39	5.51	0.009	39.85	0.066	0.27	0.0004
Q-1892	Station 2	8/24/95	66600	503	590	112.86						
Q-1893	Station 3	8/24/95	87200	500	604	144.34						
Q-1894	Station 4	8/24/95	160400	499	587	273.03	45.36	0.077	496.20	0.845	1.32	0.0022
Q-1895	Station 1	8/25/95	15800	434	515	30.66	5.01	0.010	80.45	0.156	ND (.2506)	-
Q-1896	Station 2	8/25/95	37700	443	522	72.18						
Q-1897	Station 3	8/25/95	68100	443	535	127.25						
Q-1898	Station 4	8/25/95	151100	442	522	289.44	43.61	0.084	453.60	0.869	1.18	0.0023

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-1851/c/ Q-1852/c/ Q-1858/c/ Q-1859/c/	Station 1 Station 2 Station 3 Station 4	8/16/95 8/16/95 8/16/95 8/16/95										
Q-1860 Q-1861 Q-1862 Q-1863	Station 1 Station 2 Station 3 Station 4	8/17/95 8/17/95 8/17/95 8/17/95	0.14 2.04	0.00023 0.00336	9.98 330.80	0.016 0.545	3.91 39.85	0.006 0.066	ND (2.506) 210.00	-- 0.346	ND(0.9398) 8.65	-- 0.014
Q-1879/d/ Q-1880/b,c/ Q-1881/b,c/ Q-1882/c/	Station 1 Station 2 Station 3 Station 4	8/21/95 8/21/95 8/21/95 8/21/95										
Q-1883 Q-1884 Q-1885 Q-1886	Station 1 Station 2 Station 3 Station 4	8/22/95 8/22/95 8/22/95 8/22/95	0.83 0.91	0.00105 0.00180	11.85 167.90	0.020 0.332	5.16 16.44	0.009 0.033	ND (2.506) 93.48	-- 0.185	ND(0.9398) 12.03	-- 0.024
Q-1887 Q-1888 Q-1889 Q-1890	Station 1 Station 2 Station 3 Station 4	8/23/95 8/23/95 8/23/95 8/23/95	0.22 1.26	0.00036 0.00205	13.68 215.80	0.022 0.351	4.86 21.73	0.008 0.035	ND (2.506) 109.80	-- 0.178	ND(0.9398) 12.03	-- 0.020
Q-1891 Q-1892 Q-1893 Q-1894	Station 1 Station 2 Station 3 Station 4	8/24/95 8/24/95 8/24/95 8/24/95	0.17 1.07	0.00028 0.00183	7.07 220.00	0.012 0.374	1.93 21.83	0.003 0.037	ND (2.506) 85.71	-- 0.146	ND(0.9398) 4.70	-- 0.008
Q-1895 Q-1896 Q-1897 Q-1898	Station 1 Station 2 Station 3 Station 4	8/25/95 8/25/95 8/25/95 8/25/95	0.10 0.97	0.00020 0.00187	6.79 238.60	0.013 0.457	1.76 26.06	0.003 0.050	ND (2.506) 78.19	-- 0.150	ND(0.9398) 6.39	-- 0.012

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1899	Station 1	8/28/95	17500	515	612	28.61	9.52	0.016	112.80	0.184	ND (.2506)	--
Q-1900	Station 2	8/28/95	94700	509	599	158.17	43.61	0.073	568.90	0.950	1.35	0.0022
Q-1901	Station 3	8/28/95	73600	508	616	119.41						
Q-1902	Station 4	8/28/95	48600	505	596	81.60						
Q-1903/c/	Station 1	8/29/95	15500	493	582	26.63						
Q-1904/c/	Station 2	8/29/95	41500	489	571	72.65						
Q-1905/c/	Station 3	8/29/95	42100	489	587	71.75						
Q-1906/c/	Station 4	8/29/95	16600	488	573	28.97						
Q-1907/c/	Station 1	8/30/95	17700	491	582	30.42						
Q-1908/c/	Station 2	8/30/95	23700	503	593	39.97						
Q-1909/c/	Station 3	8/30/95	18700	508	613	30.53						
Q-1910/c/	Station 4	8/30/95	32000	509	602	53.19						
Q-1911	Station 1	8/31/95	22000	380	452	48.71	9.77	0.022	129.10	0.286	0.54	0.0012
Q-1912	Station 2	8/31/95	25100	377	446	56.31						
Q-1913	Station 3	8/31/95	29000	378	456	63.61	13.28	0.029	195.00	0.428	0.32	0.0007
Q-1914	Station 4	8/31/95	25700	376	444	57.91						
Q-1915	Station 1	9/5/95	38100	519	612	62.24	15.79	0.026	168.70	0.276	0.65	0.0011
Q-1916	Station 2	9/5/95	65100	514	605	107.65	23.81	0.039	340.80	0.564	0.70	0.0012
Q-1917	Station 3	9/5/95	38200	510	611	62.48						
Q-1918	Station 4	9/5/95	39400	510	596	66.06						
Q-1919/c/	Station 1	9/6/95	45000	434	508	88.62						
Q-1920/c/	Station 2	9/6/95	47000	431	503	93.45						
Q-1921/c/	Station 3	9/6/95	53200	429	510	104.29						
Q-1922/c/	Station 4	9/6/95	45400	426	495	91.72						
Q-1923	Station 1	9/7/95	50000	455	534	93.63	24.31	0.046	184.20	0.345	0.75	0.0014
Q-1924	Station 2	9/7/95	58000	453	528	109.84						
Q-1925	Station 3	9/7/95	62000	454	538	115.17	29.57	0.055	283.20	0.526	0.60	0.0011
Q-1926	Station 4	9/7/95	48500	452	527	92.05						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-1899	Station 1	8/28/95	0.16	0.00026	11.73	0.019	3.41	0.006	ND (2.506)	--	ND(0.9398)	--
Q-1900	Station 2	8/28/95	0.97	0.00162	288.20	0.481	19.22	0.032	126.60	0.211	10.34	0.017
Q-1901	Station 3	8/28/95										
Q-1902	Station 4	8/28/95										
Q-1903/c/	Station 1	8/29/95										
Q-1904/c/	Station 2	8/29/95										
Q-1905/c/	Station 3	8/29/95										
Q-1906/c/	Station 4	8/29/95										
Q-1907/c/	Station 1	8/30/95										
Q-1908/c/	Station 2	8/30/95										
Q-1909/c/	Station 3	8/30/95										
Q-1910/c/	Station 4	8/30/95										
Q-1911	Station 1	8/31/95	0.74	0.00165	17.87	0.040	5.41	0.012	ND (2.506)	--	ND(0.9398)	--
Q-1912	Station 2	8/31/95										
Q-1913	Station 3	8/31/95	0.65	0.00142	36.34	0.080	8.30	0.018	43.61	0.096	10.24	0.022
Q-1914	Station 4	8/31/95										
Q-1915	Station 1	9/5/95	1.22	0.00199	32.83	0.054	60.65	0.099	29.57	0.048	ND(0.9398)	--
Q-1916	Station 2	9/5/95	1.16	0.00192	59.90	0.099	23.86	0.039	84.21	0.139	12.03	0.020
Q-1917	Station 3	9/5/95										
Q-1918	Station 4	9/5/95										
Q-1919/c/	Station 1	9/6/95										
Q-1920/c/	Station 2	9/6/95										
Q-1921/c/	Station 3	9/6/95										
Q-1922/c/	Station 4	9/6/95										
Q-1923	Station 1	9/7/95	0.54	0.00102	37.84	0.071	92.48	0.173	14.29	0.027	1.74	0.003
Q-1924	Station 2	9/7/95										
Q-1925	Station 3	9/7/95	0.73	0.00135	63.66	0.118	56.14	0.104	47.37	0.088	4.70	0.009
Q-1926	Station 4	9/7/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1927	Station 1	9/8/95	29900	428	505	59.17	14.29	0.028	45.61	0.090	0.27	0.0005
Q-1928	Station 2	9/8/95	48500	435	513	94.59						
Q-1929	Station 3	9/8/95	108500	439	525	206.64	39.35	0.075	929.80	1.771	7.49	0.0143
Q-1930	Station 4	9/8/95	99500	440	516	192.85						
Blank /d/	--	--	--	--	--	--	17.79	--	4.01	--	ND (.2506)	--
Q-1931	Station 1	9/11/95	20200	439	524	38.57	19.8	0.038	47.6	0.091	0.41	0.0008
Q-1932	Station 2	9/11/95	29200	437	517	56.44						
Q-1933	Station 3	9/11/95	48300	442	532	90.73	20.8	0.039	82.7	0.155	0.71	0.0013
Q-1934	Station 4	9/11/95	39700	441	520	76.31						
Q-1935/c/	Station 1	9/12/95	23200	452	539	43.01						
Q-1936/b,c/	Station 2	9/12/95	19600	214	253	77.42						
Q-1937/c/	Station 3	9/12/95	29900	460	568	52.69						
Q-1938/c/	Station 4	9/12/95	49800	465	550	90.52						
Q-1939/c/	Station 1	9/13/95	19300	350	416	46.41						
Q-1940/c/	Station 2	9/13/95	29400	345	408	72.10						
Q-1941/c/	Station 3	9/13/95	23800	347	419	56.79						
Q-1942/c/	Station 4	9/13/95	21700	350	413	52.50						
Q-1943	Station 1	9/14/95	20800	460	545	38.20	15.3	0.028	51.9	0.095	0.34	0.0006
Q-1944	Station 2	9/14/95	48400	453	532	91.04						
Q-1945	Station 3	9/14/95	48500	454	548	88.46						
Q-1946	Station 4	9/14/95	105000	449	529	198.57	29.1	0.055	263.0	0.497	0.81	0.0015
Q-1947/c/	Station 1	9/18/95	23100	338	394	58.66						
Q-1948/c/	Station 2	9/18/95	25800	339	394	65.50						
Q-1949/c/	Station 3	9/18/95	23700	339	401	59.14						
Q-1950/c/	Station 4	9/18/95	33400	344	399	83.63						
Q-1951	Station 1	9/19/95	48100	426	496	97.01	27.1	0.055	172.0	0.347	1.84	0.0037
Q-1952	Station 2	9/19/95	42400	428	496	85.41						
Q-1953	Station 3	9/19/95	54100	433	513	105.44	29.8	0.058	129.0	0.251	1.32	0.0026
Q-1954	Station 4	9/19/95	44300	435	504	87.88						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1927	Station 1	9/8/95	0.25	0.00050	9.07	0.018	3.53	0.007	ND (2.506)	--	ND(0.9398)	--
Q-1928	Station 2	9/8/95										
Q-1929	Station 3	9/8/95	1.60	0.00305	716.80	1.365	28.57	0.054	103.50	0.197	9.40	0.018
Q-1930	Station 4	9/8/95										
Blank /d/	--	--	ND(.0125)	--	0.35	--	ND (.5012)	--	6.02	--	ND (0.9398)	--
Q-1931	Station 1	9/11/95	0.25	0.0005	19.2	0.037	5.46	0.010	4.76	0.009	1.47	0.003
Q-1932	Station 2	9/11/95										
Q-1933	Station 3	9/11/95	0.71	0.0013	82.7	0.155	7.09	0.013	33.30	0.063	8.43	0.016
Q-1934	Station 4	9/11/95										
Q-1935/c/	Station 1	9/12/95										
Q-1936/b,c/	Station 2	9/12/95										
Q-1937/c/	Station 3	9/12/95										
Q-1938/c/	Station 4	9/12/95										
Q-1939/c/	Station 1	9/13/95										
Q-1940/c/	Station 2	9/13/95										
Q-1941/c/	Station 3	9/13/95										
Q-1942/c/	Station 4	9/13/95										
Q-1943	Station 1	9/14/95	0.54	0.0010	18.6	0.034	3.66	0.007	4.51	0.008	ND(0.94)	--
Q-1944	Station 2	9/14/95										
Q-1945	Station 3	9/14/95										
Q-1946	Station 4	9/14/95	0.62	0.0012	158.0	0.299	13.20	0.025	45.90	0.087	7.64	0.014
Q-1947/c/	Station 1	9/18/95										
Q-1948/c/	Station 2	9/18/95										
Q-1949/c/	Station 3	9/18/95										
Q-1950/c/	Station 4	9/18/95										
Q-1951	Station 1	9/19/95	0.73	0.0015	714.0	1.440	16.00	0.032	10.00	0.020	1.08	0.002
Q-1952	Station 2	9/19/95										
Q-1953	Station 3	9/19/95	0.61	0.0012	331.0	0.645	16.50	0.032	18.30	0.036	1.47	0.003
Q-1954	Station 4	9/19/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1955	Station 1	9/20/95	26900	401	474	56.71	23.1	0.049	49.6	0.105	0.41	0.0009
Q-1956	Station 2	9/20/95	41500	395	468	88.74						
Q-1957	Station 3	9/20/95	58100	395	476	122.12	31.6	0.066	145.0	0.305	0.58	0.0012
Q-1958	Station 4	9/20/95	55100	396	466	118.35						
Q-1959/c/	Station 1	9/21/95	16200	382	452	35.81						
Q-1960/c/	Station 2	9/21/95	21300	377	446	47.80						
Q-1961/c/	Station 3	9/21/95	25300	373	447	56.54						
Q-1962/c/	Station 4	9/21/95	26700	370	435	61.37						
Q-1963/c/	Station 1	9/22/95	15500	316	374	41.39						
Q-1964/c/	Station 2	9/22/95	17400	317	376	46.32						
Q-1965/c/	Station 3	9/22/95	25400	318	382	66.47						
Q-1966/c/	Station 4	9/22/95	22900	315	371	61.67						
Blank /d/	--	--	--	--	--	--	16.8	--	5.5	--	ND (0.25)	--
Q-1967	Station 1	9/25/95	31100	444	525	59.21	17.3	0.033	66.7	0.127	ND (0.25)	--
Q-1968	Station 2	9/25/95	44700	440	517	86.54						
Q-1969	Station 3	9/25/95	55600	443	529	105.09						
Q-1970	Station 4	9/25/95	81500	450	526	154.82	27.8	0.053	243.0	0.462	0.61	0.0012
Q-1971	Station 1	9/26/95	33300	449	528	63.08	9.5	0.018	61.2	0.116	ND (0.25)	--
Q-1972	Station 2	9/26/95	26800	447	521	51.44						
Q-2187	Station 3	9/26/95	26800	448	545	49.22						
Q-2188	Station 4	9/26/95	51000	449	523	97.45	5.5	0.011	133.0	0.254	0.59	0.0011
Q-2189/c/	Station 1	9/27/95	20900	473	555	37.65						
Q-2190/c/	Station 2	9/27/95	22100	470	549	40.28						
Q-2191/c/	Station 3	9/27/95	28100	470	561	50.11						
Q-2192/c/	Station 4	9/27/95	49200	473	552	89.17						
Q-2193	Station 1	9/28/95	66500	427	501	132.85	9.0	0.018	95.0	0.190	0.32	0.0006
Q-2194	Station 2	9/28/95	85000	416	483	175.83						
Q-2195	Station 3	9/28/95	48800	417	499	97.87						
Q-2196	Station 4	9/28/95	117700	417	486	242.04	29.3	0.060	222.0	0.457	0.92	0.0019

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1955	Station 1	9/20/95	0.18	0.0004	12.5	0.026	2.58	0.005	3.51	0.007	ND(0.94)	--
Q-1956	Station 2	9/20/95										
Q-1957	Station 3	9/20/95	0.41	0.0009	75.2	0.158	6.17	0.013	28.60	0.060	8.05	0.017
Q-1958	Station 4	9/20/95										
Q-1959/c/	Station 1	9/21/95										
Q-1960/c/	Station 2	9/21/95										
Q-1961/c/	Station 3	9/21/95										
Q-1962/c/	Station 4	9/21/95										
Q-1963/c/	Station 1	9/22/95										
Q-1964/c/	Station 2	9/22/95										
Q-1965/c/	Station 3	9/22/95										
Q-1966/c/	Station 4	9/22/95										
Blank /d/	--	--	0.02	--	0.33	--	ND (0.50)	--	ND(2.51)		ND(0.94)	--
Q-1967	Station 1	9/25/95	0.32	0.0006	14.5	0.028	2.46	0.005	3.26	0.006	ND(0.94)	--
Q-1968	Station 2	9/25/95										
Q-1969	Station 3	9/25/95										
Q-1970	Station 4	9/25/95	0.88	0.0017	90.7	0.172	11.00	0.021	32.30	0.061	3.98	0.008
Q-1971	Station 1	9/26/95	0.14	0.0003	34.1	0.065	25.10	0.048	7.02	0.013	1.78	0.003
Q-1972	Station 2	9/26/95										
Q-2187	Station 3	9/26/95										
Q-2188	Station 4	9/26/95	0.53	0.0010	67.2	0.128	14.30	0.027	25.30	0.048	2.66	0.005
Q-2189/c/	Station 1	9/27/95										
Q-2190/c/	Station 2	9/27/95										
Q-2191/c/	Station 3	9/27/95										
Q-2192/c/	Station 4	9/27/95										
Q-2193	Station 1	9/28/95	0.29	0.0006	34.6	0.069	7.62	0.015	7.52	0.015	ND(0.94)	--
Q-2194	Station 2	9/28/95										
Q-2195	Station 3	9/28/95										
Q-2196	Station 4	9/28/95	0.78	0.0016	124.0	0.255	16.80	0.035	40.60	0.083	2.66	0.005

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2197/c/	Station 1	10/2/95	40400	381	444	91.05						
Q-2198/c/	Station 2	10/2/95	33800	376	437	77.39						
Q-2199/c/	Station 3	10/2/95	36900	373	441	83.72						
Q-2200/c/	Station 4	10/2/95	36200	374	434	83.40						
Q-2201	Station 1	10/3/95	50700	505	594	85.32	7.3	0.012	66.4	0.112	0.43	0.0007
Q-2202	Station 2	10/3/95	48000	525	616	77.97						
Q-2203	Station 3	10/3/95	53700	528	633	84.90						
Q-2204	Station 4	10/3/95	74800	530	621	120.46	16.5	0.027	157.0	0.253	0.44	0.0007
Q-2205	Station 1	10/4/95	68100	422	487	139.73	11.5	0.024	55.4	0.114	0.53	0.0011
Q-2206/e/	Station 2	10/4/95	--	--	--	--						
Q-2207	Station 3	10/4/95	70100	407	479	146.46	9.5	0.020	67.2	0.140	0.44	0.0009
Q-2208	Station 4	10/4/95	50100	405	465	107.77						
Q-2209/c/	Station 1	10/5/95	44400	511	589	75.34						
Q-2210/c/	Station 2	10/5/95	47000	511	588	79.89						
Q-2211/c/	Station 3	10/5/95	60000	513	599	100.10						
Q-2212/c/	Station 4	10/5/95	40800	512	586	69.58						
Q-2213	Station 1	10/6/95	40000	302	356	112.51	26.3	0.074	45.1	0.127	0.52	0.0015
Q-2214	Station 2	10/6/95	33100	308	363	91.29						
Q-2215	Station 3	10/6/95	38700	309	369	104.93	20.6	0.056	58.1	0.158	0.38	0.0010
Q-2216	Station 4	10/6/95	35400	309	362	97.83						
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Q-2217	Station 1	10/10/95	30000	435	511	58.71	8.5	0.017	84.5	0.165	0.69	0.0014
Q-2218	Station 2	10/10/95	28700	438	515	55.68						
Q-2219	Station 3	10/10/95	28400	429	512	55.49						
Q-2220	Station 4	10/10/95	29400	430	503	58.51	4.8	0.009	59.4	0.118	0.57	0.0011
Q-2221/c/	Station 1	10/11/95	19600	407	481	40.73						
Q-2222/c/	Station 2	10/11/95	16300	387	467	34.92						
Q-2223/c/	Station 3	10/11/95	15800	385	462	34.17						
Q-2224/c/	Station 4	10/11/95	24000	384	453	53.00						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2197/c/	Station 1	10/2/95										
Q-2198/c/	Station 2	10/2/95										
Q-2199/c/	Station 3	10/2/95										
Q-2200/c/	Station 4	10/2/95										
Q-2201	Station 1	10/3/95	0.17	0.0003	18.5	0.031	3.91	0.007	4.76	0.008	ND(0.94)	--
Q-2202	Station 2	10/3/95										
Q-2203	Station 3	10/3/95										
Q-2204	Station 4	10/3/95	0.63	0.0010	61.7	0.099	9.57	0.015	24.30	0.039	ND(0.94)	--
Q-2205	Station 1	10/4/95	0.18	0.0004	13.9	0.029	9.47	0.019	9.27	0.019	1.34	0.003
Q-2206/e/	Station 2	10/4/95										
Q-2207	Station 3	10/4/95	0.08	0.0002	25.1	0.052	12.90	0.027	16.50	0.034	1.34	0.003
Q-2208	Station 4	10/4/95										
Q-2209/c/	Station 1	10/5/95										
Q-2210/c/	Station 2	10/5/95										
Q-2211/c/	Station 3	10/5/95										
Q-2212/c/	Station 4	10/5/95										
Q-2213	Station 1	10/6/95	0.11	0.0003	11.9	0.033	6.94	0.020	5.51	0.015	1.78	0.005
Q-2214	Station 2	10/6/95										
Q-2215	Station 3	10/6/95	0.11	0.0003	15.2	0.041	5.64	0.015	7.27	0.020	ND(0.94)	--
Q-2216	Station 4	10/6/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Q-2217	Station 1	10/10/95	0.32	0.0006	14.7	0.029	7.49	0.015	ND(2.51)	--	ND(0.94)	--
Q-2218	Station 2	10/10/95										
Q-2219	Station 3	10/10/95										
Q-2220	Station 4	10/10/95	0.42	0.0008	13.7	0.027	8.07	0.016	6.52	0.013	1.15	0.002
Q-2221/c/	Station 1	10/11/95										
Q-2222/c/	Station 2	10/11/95										
Q-2223/c/	Station 3	10/11/95										
Q-2224/c/	Station 4	10/11/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2225	Station 1	10/12/95	25200	463	546	46.13	7.8	0.014	30.6	0.056	0.62	0.0011
Q-2226	Station 2	10/12/95	22300	463	545	40.93						
Q-2227	Station 3	10/12/95	19000	461	552	34.42	6.8	0.012	34.6	0.063	0.37	0.0007
Q-2228	Station 4	10/12/95	21200	459	538	39.38						
Q-2229/c/	Station 1	10/16/95	21400	455	541	39.59						
Q-2230/c/	Station 2	10/16/95	17300	450	534	32.39						
Q-2231/c/	Station 3	10/16/95	21500	453	546	39.36						
Q-2232/c/	Station 4	10/16/95	33600	453	534	62.87						
Q-2233	Station 1	10/17/95	25300	431	509	49.66	13.5	0.026	49.6	0.097	0.41	0.0008
Q-2234	Station 2	10/17/95	26100	422	497	52.51						
Q-2235	Station 3	10/17/95	39000	420	504	77.41	14.8	0.029	117.0	0.232	0.63	0.0013
Q-2659	Station 4	10/17/95	26100	418	490	53.24						
Q-2660/c/	Station 1	10/18/95	33800	420	497	68.04						
Q-2661/c/	Station 2	10/18/95	26800	409	480	55.88						
Q-2662/c/	Station 3	10/18/95	25700	408	491	52.36						
Q-2663/c/	Station 4	10/18/95	28700	409	482	59.59						
Q-2664	Station 1	10/19/95	48800	338	402	121.47	11.5	0.029	80.2	0.200	0.92	0.0023
Q-2665	Station 2	10/19/95	46800	337	398	117.65						
Q-2666	Station 3	10/19/95	36000	338	406	88.62						
Q-2667	Station 4	10/19/95	57900	340	397	145.90	42.4	0.107	121.0	0.305	0.79	0.0020
Q-2668	Station 1	10/20/95	21800	326	387	56.36	18.8	0.049	29.8	0.077	0.44	0.0011
Q-2669	Station 2	10/20/95	18200	326	390	46.64						
Q-2670	Station 3	10/20/95	16600	328	399	41.63						
Q-2671	Station 4	10/20/95	16400	329	391	41.90	ND(2.51)	--	46.1	0.118	0.36	0.0009
Q-2672/c/	Station 1	10/23/95	36300	428	510	71.21						
Q-2673/c/	Station 2	10/23/95	31000	424	502	61.76						
Q-2674/c/	Station 3	10/23/95	30900	425	515	59.96						
Q-2675/c/	Station 4	10/23/95	34800	421	497	70.01						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2225	Station 1	10/12/95	0.20	0.0004	7.9	0.014	2.98	0.005	ND(2.51)	--	ND(0.94)	--
Q-2226	Station 2	10/12/95										
Q-2227	Station 3	10/12/95	0.24	0.0004	9.6	0.017	2.18	0.004	ND(2.51)	--	ND(0.94)	--
Q-2228	Station 4	10/12/95										
Q-2229/c/	Station 1	10/16/95										
Q-2230/c/	Station 2	10/16/95										
Q-2231/c/	Station 3	10/16/95										
Q-2232/c/	Station 4	10/16/95										
Q-2233	Station 1	10/17/95	0.32	0.0006	7.6	0.015	3.18	0.006	ND(2.51)	--	ND(0.94)	--
Q-2234	Station 2	10/17/95										
Q-2235	Station 3	10/17/95	0.95	0.0019	29.1	0.058	11.50	0.023	5.01	0.010	1.60	0.003
Q-2659	Station 4	10/17/95										
Q-2660/c/	Station 1	10/18/95										
Q-2661/c/	Station 2	10/18/95										
Q-2662/c/	Station 3	10/18/95										
Q-2663/c/	Station 4	10/18/95										
Q-2664	Station 1	10/19/95	0.32	0.0008	42.6	0.106	9.65	0.024	9.52	0.024	2.49	0.006
Q-2665	Station 2	10/19/95										
Q-2666	Station 3	10/19/95										
Q-2667	Station 4	10/19/95	0.41	0.0010	53.1	0.134	31.30	0.079	29.60	0.075	4.70	0.012
Q-2668	Station 1	10/20/95	0.15	0.0004	6.9	0.018	1.99	0.005	ND(2.51)	--	2.49	0.006
Q-2669	Station 2	10/20/95										
Q-2670	Station 3	10/20/95										
Q-2671	Station 4	10/20/95	0.18	0.0005	6.2	0.016	2.68	0.007	4.76	0.012	1.60	0.004
Q-2672/c/	Station 1	10/23/95										
Q-2673/c/	Station 2	10/23/95										
Q-2674/c/	Station 3	10/23/95										
Q-2675/c/	Station 4	10/23/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2676	Station 1	10/24/95	39200	458	548	71.57	ND(2.51)	--	70.7	0.129	0.67	0.0012
Q-2677	Station 2	10/24/95	32600	458	546	59.72						
Q-2678	Station 3	10/24/95	34800	457	554	62.80	ND(2.51)	--	55.6	0.100	0.62	0.0011
--	Station 4	10/24/95	--	--	--	--						
Q-2689/c/	Station 1	10/25/95	12600	427	513	24.56						
Q-2690/c/	Station 2	10/25/95	16200	424	506	32.00						
Q-2691/c/	Station 3	10/25/95	15200	425	519	29.31						
Q-2692/c/	Station 4	10/25/95	19200	423	506	37.95						
Q-2693	Station 1	10/26/95	16100	254	306	52.58	ND(2.51)	--	38.8	0.127	0.45	0.0015
Q-2694	Station 2	10/26/95	18500	255	305	60.70	20.3	0.067	35.6	0.117	ND(0.25)	--
Q-2695	Station 3	10/26/95	14500	255	312	46.44						
Q-2696	Station 4	10/26/95	15800	255	305	51.84						
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Q-2697	Station 1	11/3/95	31700	319	384	82.46	8.02	0.021	47.4	0.123	0.79	0.0021
Q-2698	Station 2	11/3/95	28100	320	384	73.12	8.27	0.022	36.8	0.096	0.57	0.0015
Q-2699	Station 3	11/3/95	30100	315	385	78.20						
Q-2700	Station 4	11/3/95	30400	316	377	80.66						
Q-2701	Station 1	11/6/95	80000	505	609	131.31	27.80	0.046	416.0	0.683	0.88	0.0014
Q-2702	Station 2	11/6/95	43700	503	602	72.58						
Q-2703	Station 3	11/6/95	46200	499	609	75.89						
Q-2704	Station 4	11/6/95	29400	498	596	49.36	11.30	0.019	53.6	0.090	0.59	0.0010
Q-2705/c/	Station 1	11/7/95	55200	488	585	94.34						
Q-2706/c/	Station 2	11/7/95	39800	490	585	68.03						
Q-2707/c/	Station 3	11/7/95	42500	491	595	71.39						
Q-2708/c/	Station 4	11/7/95	38800	492	585	66.34						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2676	Station 1	10/24/95	0.24	0.0004	16.8	0.031	6.06	0.011	4.76	0.009	2.04	0.004
Q-2677	Station 2	10/24/95										
Q-2678	Station 3	10/24/95	0.22	0.0004	17.7	0.032	7.17	0.013	6.52	0.012	5.58	0.010
--	Station 4	10/24/95										
Q-2689/c/	Station 1	10/25/95										
Q-2690/c/	Station 2	10/25/95										
Q-2691/c/	Station 3	10/25/95										
Q-2692/c/	Station 4	10/25/95										
Q-2693	Station 1	10/26/95	0.26	0.0008	817.0	2.668	25.10	0.082	3.01	0.010	3.35	0.011
Q-2694	Station 2	10/26/95	0.31	0.0010	40.9	0.134	13.50	0.044	13.30	0.044	2.93	0.010
Q-2695	Station 3	10/26/95										
Q-2696	Station 4	10/26/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Q-2697	Station 1	11/3/95	0.31	0.0008	10.7	0.028	4.86	0.013	4.26	0.011	ND(0.94)	--
Q-2698	Station 2	11/3/95	0.49	0.0013	10.4	0.027	5.11	0.013	4.26	0.011	ND(0.94)	--
Q-2699	Station 3	11/3/95										
Q-2700	Station 4	11/3/95										
Q-2701	Station 1	11/6/95	0.77	0.0013	138.0	0.227	20.40	0.033	100.00	0.164	9.96	0.016
Q-2702	Station 2	11/6/95										
Q-2703	Station 3	11/6/95										
Q-2704	Station 4	11/6/95	0.52	0.0009	17.2	0.029	16.70	0.028	34.80	0.058	ND(0.94)	--
Q-2705/c/	Station 1	11/7/95										
Q-2706/c/	Station 2	11/7/95										
Q-2707/c/	Station 3	11/7/95										
Q-2708/c/	Station 4	11/7/95										

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
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Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (μg)	Run Time (minutes)	Corrected Sample Volume (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
Q-2709/c/	Station 1	11/8/95	67200	492	591	113.75						
Q-2710/c/	Station 2	11/8/95	79100	492	589	134.35						
Q-2711/c/	Station 3	11/8/95	109800	492	598	183.64						
Q-2712/c/	Station 4	11/8/95	66300	494	589	112.64						
Q-2713	Station 1	11/9/95	32800	506	607	54.06	13.30	0.022	68.7	0.113	0.48	0.0008
Q-2714	Station 2	11/9/95	74400	503	600	124.00						
Q-2715	Station 3	11/9/95	203700	366	446	457.05	65.20	0.146	657.0	1.474	1.77	0.0040
Q-2716	Station 4	11/9/95	219600	360	428	513.61	62.40	0.146	554.0	1.296	6.12	0.0143
Q-2717	Station 1	11/13/95	59100	405	485	121.83	30.10	0.062	162.0	0.334	1.16	0.0024
Q-2718	Station 2	11/13/95	39700	403	481	82.53						
Q-2719	Station 3	11/13/95	75100	402	489	153.46	33.80	0.069	215.0	0.439	1.14	0.0023
Q-2720	Station 4	11/13/95	53700	404	480	111.84						
Q-2721/c/	Station 1	11/14/95	33000	422	505	65.34						
Q-2722/c/	Station 2	11/14/95	54700	419	501	109.27						
Q-2723/c/	Station 3	11/14/95	47400	422	513	92.41						
Q-2724/c/	Station 4	11/14/95	52900	422	502	105.48						
Q-2725	Station 1	11/15/95	18600	542	653	28.49	11.80	0.018	55.4	0.085	0.46	0.0007
Q-2726	Station 2	11/15/95	17700	304	364	48.59						
Q-2727	Station 3	11/15/95	34800	267	326	106.91						
Q-2728	Station 4	11/15/95	94200	266	318	296.31	30.80	0.097	249.0	0.783	1.87	0.0059
Q-2729	Station 1	11/16/95	31700	416	500	63.42	14.80	0.030	136.0	0.272	0.57	0.0011
Q-2730	Station 2	11/16/95	31900	414	494	64.63						
Q-2731	Station 3	11/16/95	82400	419	510	161.72	27.10	0.053	356.0	0.699	1.04	0.0020
Q-2732	Station 4	11/16/95	76300	418	497	153.37						
Q-2733/c/	Station 1	11/17/95	14300	348	419	34.14						
Q-2734/c/	Station 2	11/17/95	24800	344	413	60.10						
Q-2735/c/	Station 3	11/17/95	32000	343	419	76.32						
Q-2736/c/	Station 4	11/17/95	25100	342	408	61.45						

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-2709/c/	Station 1	11/8/95										
Q-2710/c/	Station 2	11/8/95										
Q-2711/c/	Station 3	11/8/95										
Q-2712/c/	Station 4	11/8/95										
Q-2713	Station 1	11/9/95	0.34	0.0006	164.0	0.270	19.30	0.032	7.02	0.012	ND(0.94)	--
Q-2714	Station 2	11/9/95										
Q-2715	Station 3	11/9/95	1.85	0.0042	378.0	0.848	15.40	0.035	109.00	0.245	11.70	0.026
Q-2716	Station 4	11/9/95	1.24	0.0029	333.0	0.779	18.10	0.042	99.50	0.233	15.80	0.037
Q-2717	Station 1	11/13/95	0.54	0.0011	296.0	0.610	19.40	0.040	31.80	0.066	2.51	0.005
Q-2718	Station 2	11/13/95										
Q-2719	Station 3	11/13/95	0.67	0.0014	105.0	0.215	17.80	0.036	44.40	0.091	5.33	0.011
Q-2720	Station 4	11/13/95										
Q-2721/c/	Station 1	11/14/95										
Q-2722/c/	Station 2	11/14/95										
Q-2723/c/	Station 3	11/14/95										
Q-2724/c/	Station 4	11/14/95										
Q-2725	Station 1	11/15/95	0.15	0.0002	331.0	0.507	5.14	0.008	4.01	0.006	ND(0.94)	--
Q-2726	Station 2	11/15/95										
Q-2727	Station 3	11/15/95										
Q-2728	Station 4	11/15/95	0.50	0.0016	466.0	1.466	12.60	0.040	43.90	0.138	5.01	0.016
Q-2729	Station 1	11/16/95	0.24	0.0005	70.2	0.140	17.00	0.034	16.50	0.033	ND(0.94)	--
Q-2730	Station 2	11/16/95										
Q-2731	Station 3	11/16/95	1.83	0.0036	469.0	0.920	127.00	0.249	59.60	0.117	4.70	0.009
Q-2732	Station 4	11/16/95										
Q-2733/c/	Station 1	11/17/95										
Q-2734/c/	Station 2	11/17/95										
Q-2735/c/	Station 3	11/17/95										
Q-2736/c/	Station 4	11/17/95										

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (μg)	Run Time (minutes)	Corrected Sample Volume (m^3)	Particulate Concentration ($\mu\text{g}/\text{m}^3$)	Total Barium on filter (μg)	Airborne Barium Concentration ($\mu\text{g}/\text{m}^3$)	Total Zinc on filter (μg)	Airborne Zinc Concentration ($\mu\text{g}/\text{m}^3$)	Total Arsenic on filter (μg)	Airborne Arsenic Concentration ($\mu\text{g}/\text{m}^3$)
Q-2737/c/	Station 1	11/20/95										
Q-2738/c/	Station 2	11/20/95										
Q-2739/c/	Station 3	11/20/95										
Q-2740/c/	Station 4	11/20/95										
Q-2741	Station 1	11/21/95	66000	570	686	96.14	17.00	0.025	281.0	0.409	11.50	0.0168
Q-2742	Station 2	11/21/95	25900	573	685	37.79	10.00	0.015	69.2	0.101	1.32	0.0019
Q-2743	Station 3	11/21/95	39800	573	698	57.03						
Q-2744	Station 4	11/21/95	27600	561	669	41.24						
Q-2745/c/	Station 1	11/22/95	53500	500	602	88.80						
Q-2746/c/	Station 2	11/22/95	14100	248	297	47.51						
Q-2747/c/	Station 3	11/22/95	21700	248	302	71.75						
Q-2748/c/	Station 4	11/22/95	59700	500	597	100.04						
Q-2749	Station 1	11/24/95	53300	499	605	88.04	9.77	0.016	102.0	0.168	4.31	0.0071
Q-2750	Station 2	11/24/95	38800	496	590	65.71						
Q-2751	Station 3	11/24/95	104300	495	605	172.49	24.60	0.041	331.0	0.547	1.49	0.0025
Q-2752	Station 4	11/24/95	62100	495	593	104.65						
Blank /d/	--	--	--	--	--	--	10.50	--	ND (1.25)	--	ND (0.25)	--
Q-2753	Station 1	11/27/95	68200	615	741	92.03	42.60	0.057	176.0	0.237	2.07	0.0028
Q-2754	Station 2	11/27/95	116900	615	738	158.43						
Q-2755	Station 3	11/27/95	153000	613	749	204.32	123.00	0.164	328.0	0.438	9.82	0.0131
Q-2756	Station 4	11/27/95	44700	602	717	62.32						
Q-2757/c/	Station 1	11/28/95	45400	536	646	70.26						
Q-2758/c/	Station 2	11/28/95	41200	535	642	64.15						
Q-2759/c/	Station 3	11/28/95	42400	539	658	64.45						
Q-2760/c/	Station 4	11/28/95	29900	539	643	46.53						
Q-2761	Station 1	11/29/95	57200	553	665	86.04	52.10	0.078	133.0	0.200	0.71	0.0011
Q-2762	Station 2	11/29/95	42800	553	664	64.43						
Q-2763	Station 3	11/29/95	57600	553	676	85.24						
Q-2764	Station 4	11/29/95	37800	553	656	57.60	23.60	0.036	70.7	0.108	0.54	0.0008

Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2737/c/	Station 1	11/20/95										
Q-2738/c/	Station 2	11/20/95										
Q-2739/c/	Station 3	11/20/95										
Q-2740/c/	Station 4	11/20/95										
Q-2741	Station 1	11/21/95	0.77	0.0011	286.0	0.417	23.80	0.035	48.90	0.071	ND(0.94)	--
Q-2742	Station 2	11/21/95	0.27	0.0004	22.0	0.032	29.10	0.042	10.00	0.015	ND(0.94)	--
Q-2743	Station 3	11/21/95										
Q-2744	Station 4	11/21/95										
Q-2745/c/	Station 1	11/22/95										
Q-2746/c/	Station 2	11/22/95										
Q-2747/c/	Station 3	11/22/95										
Q-2748/c/	Station 4	11/22/95										
Q-2749	Station 1	11/24/95	0.32	0.0005	62.7	0.104	15.50	0.026	29.30	0.048	ND(0.94)	--
Q-2750	Station 2	11/24/95										
Q-2751	Station 3	11/24/95	0.47	0.0008	96.7	0.160	18.60	0.031	98.70	0.163	ND(0.94)	--
Q-2752	Station 4	11/24/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	ND (0.50)	--	ND(2.51)	--	2.19	--
Q-2753	Station 1	11/27/95	0.40	0.0005	43.6	0.059	7.92	0.011	78.70	0.106	ND(0.94)	--
Q-2754	Station 2	11/27/95										
Q-2755	Station 3	11/27/95	0.70	0.0009	128.0	0.171	19.30	0.026	148.00	0.198	ND(0.94)	--
Q-2756	Station 4	11/27/95										
Q-2757/c/	Station 1	11/28/95										
Q-2758/c/	Station 2	11/28/95										
Q-2759/c/	Station 3	11/28/95										
Q-2760/c/	Station 4	11/28/95										
Q-2761	Station 1	11/29/95	0.43	0.0006	30.8	0.046	14.50	0.022	31.10	0.047	ND(0.94)	--
Q-2762	Station 2	11/29/95										
Q-2763	Station 3	11/29/95										
Q-2764	Station 4	11/29/95	0.40	0.0006	19.8	0.030	31.60	0.048	37.60	0.057	ND(0.94)	--

**Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2950	Station 1	12/1/95	27200	397	475	57.27	13.30	0.028	120.0	0.253	ND(0.25)	--
Q-2951	Station 2	12/1/95	32700	395	469	69.68						
Q-2952	Station 3	12/1/95	129100	392	483	267.40	54.40	0.113	1700.0	3.521	2.36	0.0049
Q-2953	Station 4	12/1/95	11200	389	463	24.19						
Q-2954/c/	Station 1	12/14/95	32800	469	569	57.60						
Q-2955/c/	Station 2	12/14/95	24200	449	543	44.55						
Q-2956/c/	Station 3	12/14/95	21700	448	552	39.31						
--/g/	Station 4	12/14/95	--	--	--	--						
Blank /d/	--	--	--	--	--	--	8.27	--	ND (1.25)	--	ND (0.25)	--

PROJECT TO DATE:

Mean Concentration:	83.57	--	0.041	--	0.331	--	0.0016
Standard Deviation:	73.94	--	0.041	--	0.501	--	0.0023

REPORTING PERIOD

7/24/95 - 12/14/95:

Mean Concentration:	95.82	--	0.048	--	0.403	--	0.0022
Standard Deviation:	69.78	--	0.035	--	0.511	--	0.0030

ND Not detected.

/a/ Particulate concentrations could not be calculated because filters from a previous project were used and therefore could not be weighed by the laboratory.

/b/ Sample not collected due to sampler malfunction

/c/ Metals analysis not performed for these samples because they were grouped with another day's sample, some of which were selected for analysis, in accordance with air monitoring plan goal of limiting analysis to 25% of samples collected.

/d/ Only total mass of metals reported because blank filters are laboratory blanks.

/e/ Sample duration and particulate concentration could not be determined due to interruption of power supply to samplers.

/f/ Metals analysis not performed for these samples because they were grouped with another day's sample, some of which were selected for analysis, in accordance with air monitoring plan goal of limiting analysis to 25% of samples collected.

/g/ Station 4 not operated due to storm damage.

Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Filter Number	Location	Sampling Period	Total Cadmium on filter (μg)	Airborne Cadmium Concentration ($\mu\text{g}/\text{m}^3$)	Total Lead on filter (μg)	Airborne Lead Concentration ($\mu\text{g}/\text{m}^3$)	Total Nickel on filter (μg)	Airborne Nickel Concentration ($\mu\text{g}/\text{m}^3$)	Total Chromium on filter (μg)	Airborne Chromium Concentration ($\mu\text{g}/\text{m}^3$)	Total Hexavalent Chromium on filter (μg)	Airborne Hexavalent Chromium Concentration ($\mu\text{g}/\text{m}^3$)
Q-2950	Station 1	12/1/95	0.32	0.0007	105.0	0.221	21.10	0.044	38.60	0.081	ND(0.94)	--
Q-2951	Station 2	12/1/95										
Q-2952	Station 3	12/1/95	2.61	0.0054	947.0	1.962	36.80	0.076	293.00	0.607	2.76	0.006
Q-2953	Station 4	12/1/95										
Q-2954/c/	Station 1	12/14/95										
Q-2955/c/	Station 2	12/14/95										
Q-2956/c/	Station 3	12/14/95										
--/g/	Station 4	12/14/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	ND (0.50)	--	ND(2.51)	--	1.93	--
PROJECT TO DATE:												
Mean Concentration:	--		--	0.0009	--	0.168	--	0.022	--	0.061	--	0.013
Standard Deviation:	--		--	0.0010	--	0.342	--	0.031	--	0.099	--	0.011
REPORTING PERIOD												
7/24/95 - 12/14/95:												
Mean Concentration:	--		--	0.0011	--	0.268	--	0.032	--	0.080	--	0.012
Standard Deviation:	--		--	0.0009	--	0.449	--	0.040	--	0.095	--	0.010

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9452AP01	Station 1	12/28-29	1415	7.5	300	ND	--	ND	--	ND	--
9452AP02	Station 2	12/28-29	1425	9.2	373	ND	--	ND	--	ND	--
9452AP03	Station 3	12/28-29	1435	6.0	246	ND	--	ND	--	ND	--
9452AP04	Station 4	12/28-29	1445	8.7	355	ND	--	ND	--	ND	--
9452BP01	Station 1	12/29-30	1430	7.3	296	ND	--	ND	--	ND	--
9452BP02	Station 2	12/29-30	1420	9.7	389	ND	--	ND	--	ND	--
9452BP03	Station 3	12/29-30	1430	6.1	245	ND	--	ND	--	ND	--
9452BP04	Station 4	12/29-30	1430	8.3	335	ND	--	ND	--	ND	--
9501AP01	Station 1	1/3-4	1410	7.4	297	ND	--	ND	--	ND	--
9501AP02	Station 2	1/3-4	1410	11.2	447	ND	--	ND	--	ND	--
9501CP01	Station 1	1/4-5	1440	6.1	250	ND	--	ND	--	ND	--
9501CP02	Station 2	1/4-5	1470	9.6	399	ND	--	ND	--	ND	--
--	--	1/5	PUF samples for this period were not selected for analysis.								
--	--	1/6	No sampling. Scheduled day off for contractor.								
9502AP01	Station 1	1/9-10	1410	7.0	281	ND	--	ND	--	ND	--
9502AP04	Station 4	1/9-10	1450	8.0	328	ND	--	ND	--	ND	--
--	--	1/10-11	No sampling. No demolition work performed 1/10/95.								
--	--	1/11-12	PUF samples for this period were not selected for analysis.								
--	--	1/12-13	No sampling. Limited dust-generating work performed on 1/12/95.								
9502EP01	Station 1	1/13	385	6.1	67	ND	--	ND	--	ND	--
9502EP03	Station 3	1/13	370	4.8	50	ND	--	ND	--	ND	--
--	--	1/16-17	No sampling. Holiday on 1/16/95.								
--	--	1/17-18	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9452AP01	Station 1	12/28-29	ND	--	ND	--	ND	--	ND	--
9452AP02	Station 2	12/28-29	ND	--	ND	--	ND	--	ND	--
9452AP03	Station 3	12/28-29	ND	--	ND	--	ND	--	ND	--
9452AP04	Station 4	12/28-29	ND	--	ND	--	ND	--	ND	--
9452BP01	Station 1	12/29-30	ND	--	ND	--	ND	--	ND	--
9452BP02	Station 2	12/29-30	ND	--	ND	--	ND	--	ND	--
9452BP03	Station 3	12/29-30	ND	--	ND	--	ND	--	ND	--
9452BP04	Station 4	12/29-30	ND	--	ND	--	ND	--	ND	--
9501AP01	Station 1	1/3-4	ND	--	ND	--	ND	--	ND	--
9501AP02	Station 2	1/3-4	ND	--	ND	--	ND	--	ND	--
9501CP01	Station 1	1/4-5	ND	--	ND	--	ND	--	ND	--
9501CP02	Station 2	1/4-5	ND	--	ND	--	ND	--	ND	--
--	--	1/5	PUF samples for this period were not selected for analysis.							
--	--	1/6	No sampling. Scheduled day off for contractor.							
9502AP01	Station 1	1/9-10	ND	--	ND	--	ND	--	ND	--
9502AP04	Station 4	1/9-10	ND	--	ND	--	ND	--	ND	--
--	--	1/10-11	No sampling. No demolition work performed 1/10/95.							
--	--	1/11-12	PUF samples for this period were not selected for analysis.							
--	--	1/12-13	No sampling. Limited dust-generating work performed on 1/12/95.							
9502EP01	Station 1	1/13	ND	--	ND	--	ND	--	ND	--
9502EP03	Station 3	1/13	ND	--	ND	--	ND	--	ND	--
--	--	1/16-17	No sampling. Holiday on 1/16/95.							
--	--	1/17-18	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (μg)	Airborne Naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total 2-Methyl- naphthalene (μg)	Airborne 2-Methyl- naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total 2-Chloro- naphthalene (μg)	Airborne 2-Chloro- naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total Acenaph- thylene (μg)	Airborne Acenaph- thylene Concentration ($\mu\text{g}/\text{m}^3$)
9452AP01	Station 1	12/28-29	21.4	0.071	19	0.063	ND	--	2	0.007
9452AP02	Station 2	12/28-29	86.4	0.232	72	0.193	ND	--	4.5	0.012
9452AP03	Station 3	12/28-29	51.4	0.209	34	0.138	ND	--	3.2	0.013
9452AP04	Station 4	12/28-29	33.4	0.094	22	0.062	ND	--	2.7	0.008
9452BP01	Station 1	12/29-30	33.8	0.114	24	0.081	ND	--	1.9	0.006
9452BP02	Station 2	12/29-30	47.8	0.123	37	0.095	ND	--	2.4	0.006
9452BP03	Station 3	12/29-30	37.8	0.154	27	0.110	ND	--	2.2	0.009
9452BP04	Station 4	12/29-30	25.8	0.077	19	0.057	ND	--	2	0.006
9501AP01	Station 1	1/3-4	5.2	0.018	5.2	0.018	ND	--	ND	--
9501AP02	Station 2	1/3-4	6.4	0.014	9.7	0.022	ND	--	ND	--
9501CP01	Station 1	1/4-5	9.6	0.038	5.9	0.024	ND	--	ND	--
9501CP02	Station 2	1/4-5	8.6	0.022	11	0.028	ND	--	ND	--
--	--	1/5	PUF samples for this period were not selected for analysis.							
--	--	1/6	No sampling. Scheduled day off for contractor.							
9502AP01	Station 1	1/9-10	2.6	0.009	6.5	0.023	ND	--	ND	--
9502AP04	Station 4	1/9-10	1.5	0.005	6	0.018	ND	--	ND	--
--	--	1/10-11	No sampling. No demolition work performed 1/10/95.							
--	--	1/11-12	PUF samples for this period were not selected for analysis.							
--	--	1/12-13	No sampling. Limited dust-generating work performed on 1/12/95.							
9502EP01	Station 1	1/13	2	0.030	1.2	0.018	ND	--	ND	--
9502EP03	Station 3	1/13	3.4	0.068	1.4	0.028	ND	--	ND	--
--	--	1/16-17	No sampling. Holiday on 1/16/95.							
--	--	1/17-18	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne
			Acenaphthene (µg)	Acenaphthene Concentration (µg/m³)	Fluorene (µg)	Fluorene Concentration (µg/m³)	Phenanthrene (µg)	Phenanthrene Concentration (µg/m³)	Anthracene (µg)	Anthracene Concentration (µg/m³)	Fluoranthene (µg)	Fluoranthene Concentration (µg/m³)
9452AP0	Station 1	12/28-29	1.2	0.004	2.3	0.008	5.9	0.020	ND	--	1.2	0.004
9452AP0	Station 2	12/28-29	2.3	0.006	3.7	0.010	6.6	0.018	ND	--	1.3	0.003
9452AP0	Station 3	12/28-29	1.5	0.006	2	0.008	3.9	0.016	ND	--	ND	--
9452AP0	Station 4	12/28-29	ND	--	1.6	0.005	3.2	0.009	ND	--	ND	--
9452BP0	Station 1	12/29-30	1.6	0.005	2.1	0.007	4.7	0.016	ND	--	ND	--
9452BP0	Station 2	12/29-30	2	0.005	2.4	0.006	4.1	0.011	ND	--	ND	--
9452BP0	Station 3	12/29-30	1.3	0.005	1.8	0.007	3.5	0.014	ND	--	ND	--
9452BP0	Station 4	12/29-30	1	0.003	1.4	0.004	2.8	0.008	ND	--	ND	--
9501AP0	Station 1	1/3-4	ND	--	ND	--	2.4	0.008	ND	--	ND	--
9501AP0	Station 2	1/3-4	ND	--	1.1	0.002	2.8	0.006	ND	--	ND	--
9501CP0	Station 1	1/4-5	ND	--	ND	--	2.4	0.010	ND	--	ND	--
9501CP0	Station 2	1/4-5	ND	--	1.2	0.003	ND	--	ND	--	ND	--
--	--	1/5	PUF samples for this period were not selected for analysis.									
--	--	1/6	No sampling. Scheduled day off for contractor.									
9502AP0	Station 1	1/9-10	ND	--	ND	--	1.1	0.004	ND	--	ND	--
9502AP0	Station 4	1/9-10	ND	--	ND	--	1.1	0.003	ND	--	ND	--
--	--	1/10-11	No sampling. No demolition work performed 1/10/95.									
--	--	1/11-12	PUF samples for this period were not selected for analysis.									
--	--	1/12-13	No sampling. Limited dust-generating work performed on 1/12/95.									
9502EP0	Station 1	1/13	ND	--	ND	--	ND	--	ND	--	ND	--
9502EP0	Station 3	1/13	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	1/16-17	No sampling. Holiday on 1/16/95.									
--	--	1/17-18	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/					
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9452AP01	Station 1	12/28-29	ND	--	ND
9452AP02	Station 2	12/28-29	1.2	0.003	ND
9452AP03	Station 3	12/28-29	ND	--	ND
9452AP04	Station 4	12/28-29	ND	--	ND
9452BP01	Station 1	12/29-30	ND	--	ND
9452BP02	Station 2	12/29-30	ND	--	ND
9452BP03	Station 3	12/29-30	ND	--	ND
9452BP04	Station 4	12/29-30	ND	--	ND
9501AP01	Station 1	1/3-4	ND	--	ND
9501AP02	Station 2	1/3-4	ND	--	ND
9501CP01	Station 1	1/4-5	ND	--	ND
9501CP02	Station 2	1/4-5	ND	--	ND
--	--	1/5	PUF samples for this period were not selected for analysis.		
--	--	1/6	No sampling. Scheduled day off for contractor.		
9502AP01	Station 1	1/9-10	ND	--	ND
9502AP04	Station 4	1/9-10	ND	--	ND
--	--	1/10-11	No sampling. No demolition work performed 1/10/95.		
--	--	1/11-12	PUF samples for this period were not selected for analysis.		
--	--	1/12-13	No sampling. Limited dust-generating work performed on 1/12/95.		
9502EP01	Station 1	1/13	ND	--	ND
9502EP03	Station 3	1/13	ND	--	ND
--	--	1/16-17	No sampling. Holiday on 1/16/95.		
--	--	1/17-18	PUF samples for this period were not selected for analysis.		

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9503CP01	Station 1	1/18-19	1435	5.8	237	ND	--	ND	--	ND	--
9503CP02	Station 2	1/18-19	1440	9.6	391	ND	--	ND	--	ND	--
9503CP04	Station 4	1/18-19	1445	6.3	258	ND	--	ND	--	ND	--
--	--	1/19	PUF samples for this period were not selected for analysis.								
--	--	1/19-20	No sampling. Scheduled day off for contractor.								
9504AP01	Station 1	1/23-24	1440	5.8	238	ND	--	ND	--	ND	--
9504AP02	Station 2	1/23-24	1440	10.2	416	ND	--	ND	--	ND	--
--	--	1/24-25	No sampling. No demolition work performed 1/24/95.								
9504CP02	Station 2	1/25-26	1600	10.2	462	ND	--	ND	--	ND	--
9504CP03	Station 3	1/25-26	1605	5.7	259	ND	--	ND	--	ND	--
--	--	1/26-27	No sampling. No dust-generating work performed on 1/26/95.								
--	--	1/27	No sampling. No demolition work performed 1/27/95.								
9505AP01	Station 1	1/30-31	1430	6.0	242	ND	--	ND	--	ND	--
9505AP03	Station 3	1/30-31	1440	5.2	213	ND	--	ND	--	ND	--
--	--	1/31-2/1	No sampling. No demolition work performed 1/31/95.								
--	--	2/1-2	No sampling. No demolition work performed 2/1/95.								
9505DP01	Station 1	2/2-3	410	6.3	73	ND	--	ND	--	ND	--
9505DP04	Station 4	2/2-3	1475	6.5	271	ND	--	ND	--	ND	--
--	--	2/3	No sampling. Scheduled day off for contractor.								
9506AP01	Station 1	2/6-7	1441	4.2	170	ND	--	ND	--	ND	--
9506AP04	Station 4	2/6-7	1455	6.2	254	ND	--	ND	--	ND	--
--	--	2/7-8	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne deno(1,2,3-cd)-pyrene Concentration (µg/m³)
9503CP01	Station 1	1/18-19	ND	--	ND	--	ND	--	ND	--
9503CP02	Station 2	1/18-19	ND	--	ND	--	ND	--	ND	--
9503CP04	Station 4	1/18-19	ND	--	ND	--	ND	--	ND	--
--	--	1/19	PUF samples for this period were not selected for analysis.							
--	--	1/19-20	No sampling. Scheduled day off for contractor.							
9504AP01	Station 1	1/23-24	ND	--	ND	--	ND	--	ND	--
9504AP02	Station 2	1/23-24	ND	--	ND	--	ND	--	ND	--
--	--	1/24-25	No sampling. No demolition work performed 1/24/95.							
9504CP02	Station 2	1/25-26	ND	--	ND	--	ND	--	ND	--
9504CP03	Station 3	1/25-26	ND	--	ND	--	ND	--	ND	--
--	--	1/26-27	No sampling. No dust generating work performed on 1/26/95.							
--	--	1/27	No sampling. No demolition work performed 1/27/95.							
9505AP01	Station 1	1/30-31	ND	--	ND	--	ND	--	ND	--
9505AP03	Station 3	1/30-31	ND	--	ND	--	ND	--	ND	--
--	--	1/31-2/1	No sampling. No demolition work performed 1/31/95.							
--	--	2/1-2	No sampling. No demolition work performed 2/1/95.							
9505DP01	Station 1	2/2-3	ND	--	ND	--	ND	--	ND	--
9505DP04	Station 4	2/2-3	ND	--	ND	--	ND	--	ND	--
--	--	2/3	No sampling. Scheduled day off for contractor.							
9506AP01	Station 1	2/6-7	ND	--	ND	--	ND	--	ND	--
9506AP04	Station 4	2/6-7	ND	--	ND	--	ND	--	ND	--
--	--	2/7-8	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/										
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9503CP01	Station 1	1/18-19	63.1	0.267	42	0.177	ND	--	2.3	0.010
9503CP02	Station 2	1/18-19	63.1	0.161	55	0.141	ND	--	3	0.008
9503CP04	Station 4	1/18-19	51.1	0.198	30	0.116	ND	--	1.6	0.006
--	--	1/19	PUF samples for this period were not selected for analysis.							
--	--	1/19-20	No sampling. Scheduled day off for contractor.							
9504AP01	Station 1	1/23-24	29.3	0.123	19	0.080	ND	--	ND	--
9504AP02	Station 2	1/23-24	30.3	0.073	27	0.065	ND	--	ND	--
--	--	1/24-25	No sampling. No demolition work performed 1/24/95.							
9504CP02	Station 2	1/25-26	42.6	0.092	40	0.087	ND	--	1.6	0.003
9504CP03	Station 3	1/25-26	55.6	0.215	30	0.116	ND	--	1.3	0.005
--	--	1/26-27	No sampling. No dust generating work performed on 1/26/95.							
--	--	1/27	No sampling. No demolition work performed 1/27/95.							
9505AP01	Station 1	1/30-31	72.4	0.299	56	0.232	ND	--	4.0	0.017
9505AP03	Station 3	1/30-31	80.4	0.377	66	0.309	ND	--	4.2	0.020
--	--	1/31-2/1	No sampling. No demolition work performed 1/31/95.							
--	--	2/1-2	No sampling. No demolition work performed 2/1/95.							
9505DP01	Station 1	2/2-3	16.1	0.219	11	0.150	ND	--	ND	--
9505DP04	Station 4	2/2-3	45.1	0.167	24	0.089	ND	--	ND	--
--	--	2/3	No sampling. Scheduled day off for contractor.							
9506AP01	Station 1	2/6-7	44.5	0.262	32	0.188	ND	--	1.3	0.008
9506AP04	Station 4	2/6-7	49.5	0.195	23	0.090	ND	--	1.5	0.006
--	--	2/7-8	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9503CP0	Station 1	1/18-19	5.5	0.023	4.4	0.019	8.4	0.035	ND	--	1.5	0.006
9503CP0	Station 2	1/18-19	ND	--	3.7	0.009	6.6	0.017	ND	--	1.4	0.004
9503CP0	Station 4	1/18-19	ND	--	2	0.008	3.8	0.015	ND	--	ND	--
--	--	1/19	PUF samples for this period were not selected for analysis.									
--	--	1/19-20	No sampling. Scheduled day off for contractor.									
9504AP0	Station 1	1/23-24	1.6	0.007	1.6	0.007	4.1	0.017	ND	--	ND	--
9504AP0	Station 2	1/23-24	ND	--	1.6	0.004	3.4	0.008	ND	--	ND	--
--	--	1/24-25	No sampling. No demolition work performed 1/24/95.									
9504CP0	Station 2	1/25-26	2.0	0.004	2.2	0.005	4.6	0.010	ND	--	1.0	0.002
9504CP0	Station 3	1/25-26	1.5	0.006	1.5	0.006	3.4	0.013	ND	--	ND	--
--	--	1/26-27	No sampling. No dust generating work performed on 1/26/95.									
--	--	1/27	No sampling. No demolition work performed 1/27/95.									
9505AP0	Station 1	1/30-31	8.5	0.035	6.7	0.028	14	0.058	ND	--	2.6	0.011
9505AP0	Station 3	1/30-31	7.4	0.035	5.5	0.026	9.9	0.046	ND	--	2.0	0.009
--	--	1/31-2/1	No sampling. No demolition work performed 1/31/95.									
--	--	2/1-2	No sampling. No demolition work performed 2/1/95.									
9505DP0	Station 1	2/2-3	1.1	0.015	1.2	0.016	2.5	0.034	ND	--	ND	--
9505DP0	Station 4	2/2-3	1.9	0.007	2.4	0.009	4.4	0.016	ND	--	ND	--
--	--	2/3	No sampling. Scheduled day off for contractor.									
9506AP0	Station 1	2/6-7	3.3	0.019	3.5	0.021	7.4	0.044	ND	--	1.5	0.009
9506AP0	Station 4	2/6-7	ND	--	2.0	0.008	3.4	0.013	ND	--	ND	--
--	--	2/7-8	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9503CP01	Station 1	1/18-19	1	0.004	ND	--
9503CP02	Station 2	1/18-19	1.1	0.003	ND	--
9503CP04	Station 4	1/18-19	ND	--	ND	--
--	--	1/19	PUF samples for this period were not selected for analysis.			
--	--	1/19-20	No sampling. Scheduled day off for contractor.			
9504AP01	Station 1	1/23-24	ND	--	ND	--
9504AP02	Station 2	1/23-24	ND	--	ND	--
--	--	1/24-25	No sampling. No demolition work performed 1/24/95.			
9504CP02	Station 2	1/25-26	ND	--	ND	--
9504CP03	Station 3	1/25-26	ND	--	ND	--
--	--	1/26-27	No sampling. No dust generating work performed on 1/26/95.			
--	--	1/27	No sampling. No demolition work performed 1/27/95.			
9505AP01	Station 1	1/30-31	1.7	0.007	ND	--
9505AP03	Station 3	1/30-31	1.5	0.007	ND	--
--	--	1/31-2/1	No sampling. No demolition work performed 1/31/95.			
--	--	2/1-2	No sampling. No demolition work performed 2/1/95.			
9505DP01	Station 1	2/2-3	ND	--	ND	--
9505DP04	Station 4	2/2-3	ND	--	ND	--
--	--	2/3	No sampling. Scheduled day off for contractor.			
9506AP01	Station 1	2/6-7	ND	--	ND	--
9506AP04	Station 4	2/6-7	ND	--	ND	--
--	--	2/7-8	PUF samples for this period were not selected for analysis.			

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9506CP01	Station 1	2/8-9	1625	4.2	192	ND	--	ND	--	ND	--
9506CP03	Station 3	2/8-9	1615	4.3	197	ND	--	ND	--	ND	--
--	--	2/9-10	No sampling. No dust-generating work performed on 2/9/95.								
--	--	2/10	No sampling. No dust-generating work performed on 2/10/95.								
--	--	2/13-14	No sampling. No demolition work performed 2/13/95.								
--	--	2/14-15	No sampling. No demolition work performed 2/14/95.								
--	--	2/15-16	No sampling. No demolition work performed 2/15/95.								
9507DP03	Station 3	2/16	350	4.3	43	ND	--	ND	--	ND	--
9507DP04	Station 4	2/16	345	7.4	72	ND	--	ND	--	ND	--
--	--	2/17	No sampling. Scheduled day off for contractor.								
--	--	2/20-21	No sampling. Holiday on 2/20/95.								
9508BP02	Station 2	2/21-22	1480	4.2	176	ND	--	ND	--	ND	--
9508BP04	Station 4	2/21-22	1490	7.3	307	ND	--	ND	--	ND	--
9508CP01	Station 1	2/22-23	1440	4.7	190	ND	--	ND	--	ND	--
9508CP02	Station 2	2/22-23	1435	3.8	155	ND	--	ND	--	ND	--
9508DP02	Station 2	2/23-24	1455	4.0	166	ND	--	ND	--	ND	--
9508DP04	Station 4	2/23-24	1445	7.0	286	ND	--	ND	--	ND	--
--	--	2/24	No sampling. No demolition work performed 2/24/95.								
9509AP02	Station 2	2/27-28	1460	4.3	178	ND	--	ND	--	ND	--
9509AP04	Station 4	2/27-28	1450	6.4	264	ND	--	ND	--	ND	--
--	--	2/28-3/1	No sampling. Limited dust-generating work performed on 2/28/95.								
9509CP01	Station 1	3/1-2	1665	4.8	228	ND	--	ND	--	ND	--
9509CP04	Station 4	3/1-2	1630	6.2	286	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)- fluoranthene (µg)	Airborne Benzo(k)- fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)- anthracene (µg)	Airborne Dibenz(a,h)- anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)- pyrene (µg)	Airborne Ideno(1,2,3-cd)- pyrene Concentration (µg/m³)
9506CP01	Station 1	2/8-9	ND	--	ND	--	ND	--	ND	--
9506CP03	Station 3	2/8-9	ND	--	ND	--	ND	--	ND	--
--	--	2/9-10	No sampling. No dust-generating work performed on 2/9/95.							
--	--	2/10	No sampling. No dust-generating work performed on 2/10/95.							
--	--	2/13-14	No sampling. No demolition work performed 2/13/95.							
--	--	2/14-15	No sampling. No demolition work performed 2/14/95.							
--	--	2/15-16	No sampling. No demolition work performed 2/15/95.							
9507DP03	Station 3	2/16	ND	--	ND	--	ND	--	ND	--
9507DP04	Station 4	2/16	ND	--	ND	--	ND	--	ND	--
--	--	2/17	No sampling. Scheduled day off for contractor.							
--	--	2/20-21	No sampling. Holiday on 2/20/95.							
9508BP02	Station 2	2/21-22	ND	--	ND	--	ND	--	ND	--
9508BP04	Station 4	2/21-22	ND	--	ND	--	ND	--	ND	--
9508CP01	Station 1	2/22-23	ND	--	ND	--	ND	--	ND	--
9508CP02	Station 2	2/22-23	ND	--	ND	--	ND	--	ND	--
9508DP02	Station 2	2/23-24	ND	--	ND	--	ND	--	ND	--
9508DP04	Station 4	2/23-24	ND	--	ND	--	ND	--	ND	--
--	--	2/24	No sampling. No demolition work performed 2/24/95.							
9509AP02	Station 2	2/27-28	ND	--	ND	--	ND	--	ND	--
9509AP04	Station 4	2/27-28	ND	--	ND	--	ND	--	ND	--
--	--	2/28-3/1	No sampling. Limited dust-generating work performed on 2/28/95.							
9509CP01	Station 1	3/1-2	ND	--	ND	--	ND	--	ND	--
9509CP04	Station 4	3/1-2	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9508CP01	Station 1	2/8-9	72.1	0.375	51	0.265	ND	--	2.8	0.015
9508CP03	Station 3	2/8-9	69.1	0.351	48	0.244	ND	--	2.5	0.013
--	--	2/9-10	No sampling. No dust generating work performed on 2/9/95.							
--	--	2/10	No sampling. No dust-generating work performed on 2/10/95.							
--	--	2/13-14	No sampling. No demolition work performed 2/13/95.							
--	--	2/14-15	No sampling. No demolition work performed 2/14/95.							
--	--	2/15-16	No sampling. No demolition work performed 2/15/95.							
9507DP03	Station 3	2/16	29.6	0.688	11	0.256	ND	--	1.8	0.042
9507DP04	Station 4	2/16	20.6	0.286	7.2	0.100	ND	--	ND	--
--	--	2/17	No sampling. Scheduled day off for contractor.							
--	--	2/20-21	No sampling. Holiday on 2/20/95.							
9508BP02	Station 2	2/21-22	29.2	0.166	16	0.091	ND	--	ND	--
9508BP04	Station 4	2/21-22	27.2	0.089	14	0.046	ND	--	ND	--
9508CP01	Station 1	2/22-23	24.2	0.127	13	0.068	ND	--	ND	--
9508CP02	Station 2	2/22-23	24.2	0.156	14	0.090	ND	--	ND	--
9508DP02	Station 2	2/23-24	45.4	0.273	32	0.193	ND	--	1.3	0.008
9508DP04	Station 4	2/23-24	23.4	0.082	11	0.039	ND	--	ND	--
--	--	2/24	No sampling. No demolition work performed 2/24/95.							
9509AP02	Station 2	2/27-28	55.3	0.310	29	0.163	ND	--	ND	--
9509AP04	Station 4	2/27-28	53.3	0.202	25	0.095	ND	--	ND	--
--	--	2/28-3/1	No sampling. Limited dust-generating work performed on 2/28/95.							
9509CP01	Station 1	3/1-2	69.3	0.304	38	0.167	ND	--	1.4	0.006
9509CP04	Station 4	3/1-2	56.3	0.197	28	0.098	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (μg)	Airborne Acenaphthene Concentration (μg/m³)	Total Fluorene (μg)	Airborne Fluorene Concentration (μg/m³)	Total Phenanthrene (μg)	Airborne Phenanthrene Concentration (μg/m³)	Total Anthracene (μg)	Airborne Anthracene Concentration (μg/m³)	Total Fluoranthene (μg)	Airborne Fluoranthene Concentration (μg/m³)
9506CP0	Station 1	2/8-9	4.0	0.021	4.1	0.021	7.6	0.040	ND	--	1.4	0.007
9506CP0	Station 3	2/8-9	2.4	0.012	2.4	0.012	4.2	0.021	ND	--	1.0	0.005
--	--	2/9-10	No sampling. No dust generating work performed on 2/9/95.									
--	--	2/10	No sampling. No dust generating work performed on 2/10/95.									
--	--	2/13-14	No sampling. No demolition work performed 2/13/95.									
--	--	2/14-15	No sampling. No demolition work performed 2/14/95.									
--	--	2/15-16	No sampling. No demolition work performed 2/15/95.									
9507DP0	Station 3	2/16	ND	--	1.4	0.033	1.6	0.037	ND	--	ND	--
9507DP0	Station 4	2/16	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	2/17	No sampling. Scheduled day off for contractor.									
--	--	2/20-21	No sampling. Holiday on 2/20/95.									
9508BP0	Station 2	2/21-22	1.6	0.009	1.9	0.011	4.4	0.025	ND	--	ND	--
9508BP0	Station 4	2/21-22	1.2	0.004	1.6	0.005	3.1	0.010	ND	--	ND	--
9508CP0	Station 1	2/22-23	1.2	0.006	1.3	0.007	2.5	0.013	ND	--	ND	--
9508CP0	Station 2	2/22-23	1.1	0.007	1.1	0.007	2.1	0.014	ND	--	ND	--
9508DP0	Station 2	2/23-24	1.2	0.007	1.3	0.008	2.2	0.013	ND	--	ND	--
9508DP0	Station 4	2/23-24	ND	--	ND	--	1.4	0.005	ND	--	ND	--
--	--	2/24	No sampling. No demolition work performed 2/24/95.									
9509AP0	Station 2	2/27-28	1.5	0.008	1.7	0.010	3.1	0.017	ND	--	ND	--
9509AP0	Station 4	2/27-28	1.1	--	1.4	0.005	2.6	0.010	ND	--	ND	--
--	--	2/28-3/1	No sampling. Limited dust-generating work performed on 2/28/95.									
9509CP0	Station 1	3/1-2	3.3	0.014	3.4	0.015	8.5	0.037	ND	--	1.4	0.006
9509CP0	Station 4	3/1-2	1.8	0.006	2.0	0.007	3.9	0.014	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (µg)	Airborne Pyrene Concentration (µg/m³)	Total Benzo(g,h,i) perylene (µg)	Airborne Benzo(g,h,i)- perylene Concentration (µg/m³)
9506CP01	Station 1	2/8-9	ND	--	ND	--
9506CP03	Station 3	2/8-9	ND	--	ND	--
--	--	2/9-10	No sampling. No dust generating work performed on 2/9/95.			
--	--	2/10	No sampling. No dust generating work performed on 2/10/95.			
--	--	2/13-14	No sampling. No demolition work performed 2/13/95.			
--	--	2/14-15	No sampling. No demolition work performed 2/14/95.			
--	--	2/15-16	No sampling. No demolition work performed 2/15/95.			
9507DP03	Station 3	2/16	ND	--	ND	--
9507DP04	Station 4	2/16	ND	--	ND	--
--	--	2/17	No sampling. Scheduled day off for contractor.			
--	--	2/20-21	No sampling. Holiday on 2/20/95.			
9508BP02	Station 2	2/21-22	ND	--	ND	--
9508BP04	Station 4	2/21-22	ND	--	ND	--
9508CP01	Station 1	2/22-23	ND	--	ND	--
9508CP02	Station 2	2/22-23	ND	--	ND	--
9508DP02	Station 2	2/23-24	ND	--	ND	--
9508DP04	Station 4	2/23-24	ND	--	ND	--
--	--	2/24	No sampling. No demolition work performed 2/24/95.			
9509AP02	Station 2	2/27-28	ND	--	ND	--
9509AP04	Station 4	2/27-28	ND	--	ND	--
--	--	2/28-3/1	No sampling. Limited dust-generating work performed on 2/28/95.			
9509CP01	Station 1	3/1-2	ND	--	ND	--
9509CP04	Station 4	3/1-2	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
--	--	3/2-3	Previous sampling period extended to cover work during morning of 3/2/95.								
--	--	3/3	No sampling. Scheduled day off for contractor.								
--	--	3/6-7	PUF samples for this period were not selected for analysis.								
9510BP01	Station 1	3/7-8	1455	3.0	123	ND	--	ND	--	ND	--
9510BP02	Station 2	3/7-8	1455	4.6	189	ND	--	ND	--	ND	--
--	--	3/8-9	No sampling. Limited dust-generating work performed on 3/8/95.								
--	--	3/9-10	No sampling. No demolition work performed 3/9/95.								
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.								
--	--	3/13-14	No sampling. Limited dust-generating work performed on 3/13/95.								
--	--	3/14-15	PUF samples for this period were not selected for analysis.								
9511CP01	Station 1	3/15-16	1475	3.5	147	ND	--	ND	--	ND	--
9511CP04	Station 4	3/15-16	255	6.7	49	ND	--	ND	--	ND	--
9511DP01	Station 1	3/16-17	1535	3.2	139	ND	--	ND	--	ND	--
9511DP04	Station 4	3/16-17	1510	6.9	297	ND	--	ND	--	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.								
--	--	3/20-21	No sampling. No demolition work performed 3/20/95.								
9512BP01	Station 1	3/21-22	1480	3.4	144	ND	--	ND	--	ND	--
9512BP04	Station 4	3/21-22	1480	6.4	266	ND	--	ND	--	ND	--
--	--	3/22-23	No sampling. No demolition work performed 3/22/95.								
--	--	3/23-34	No sampling. No demolition work performed 3/23/95.								
--	--	3/24	PUF samples for this period were not selected for analysis.								
9513AP01	Station 1	3/27-28	1445	3.2	131	ND	--	ND	--	ND	--
9513AP04	Station 4	3/27-28	1450	6.1	249	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne dno(1,2,3-cd)-pyrene Concentration (µg/m³)
--	--	3/2-3	Previous sampling period extended to cover work during morning of 3/2/95.							
--	--	3/3	No sampling. Scheduled day off for contractor.							
--	--	3/6-7	PUF samples for this period were not selected for analysis.							
9510BP01	Station 1	3/7-8	ND	--	ND	--	ND	--	ND	--
9510BP02	Station 2	3/7-8	ND	--	ND	--	ND	--	ND	--
--	--	3/8-9	No sampling. Limited dust-generating work performed on 3/8/95.							
--	--	3/9-10	No sampling. No demolition work performed 3/9/95.							
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.							
--	--	3/13-14	No sampling. Limited dust-generating work performed on 3/13/95.							
--	--	3/14-15	PUF samples for this period were not selected for analysis.							
9511CP01	Station 1	3/15-16	ND	--	ND	--	ND	--	ND	--
9511CP04	Station 4	3/15-16	ND	--	ND	--	ND	--	ND	--
9511DP01	Station 1	3/16-17	ND	--	ND	--	ND	--	ND	--
9511DP04	Station 4	3/16-17	ND	--	ND	--	ND	--	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.							
--	--	3/20-21	No sampling. No demolition work performed 3/20/95.							
9512BP01	Station 1	3/21-22	ND	--	ND	--	ND	--	ND	--
9512BP04	Station 4	3/21-22	ND	--	ND	--	ND	--	ND	--
--	--	3/22-23	No sampling. No demolition work performed 3/22/95.							
--	--	3/23-34	No sampling. No demolition work performed 3/23/95.							
--	--	3/24	PUF samples for this period were not selected for analysis.							
9513AP01	Station 1	3/27-28	ND	--	ND	--	ND	--	ND	--
9513AP04	Station 4	3/27-28	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
--	--	3/2-3	Previous sampling period extended to cover work during morning of 3/2/95.							
--	--	3/3	No sampling. Scheduled day off for contractor.							
--	--	3/6-7	PUF samples for this period were not selected for analysis.							
9510BP01	Station 1	3/7-8	50.3	0.411	23	0.188	ND	--	1.0	0.008
9510BP02	Station 2	3/7-8	56.3	0.298	37	0.196	ND	--	ND	--
--	--	3/8-9	No sampling. Limited dust-generating work performed on 3/8/95.							
--	--	3/9-10	No sampling. No demolition work performed 3/9/95.							
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.							
--	--	3/13-14	No sampling. Limited dust-generating work performed on 3/13/95.							
--	--	3/14-15	PUF samples for this period were not selected for analysis.							
9511CP01	Station 1	3/15-16	54.8	0.372	32	0.217	ND	--	1.6	0.011
9511CP04	Station 4	3/15-16	5.1	0.105	2.6	0.053	ND	--	ND	--
9511DP01	Station 1	3/16-17	30.8	0.222	17.0	0.122	ND	--	ND	--
9511DP04	Station 4	3/16-17	20.8	0.070	13.0	0.044	ND	--	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.							
--	--	3/20-21	No sampling. No demolition work performed 3/20/95.							
9512BP01	Station 1	3/21-22	9.6	0.067	3.9	0.027	ND	--	ND	--
9512BP04	Station 4	3/21-22	9.6	0.036	3.2	0.012	ND	--	ND	--
--	--	3/22-23	No sampling. No demolition work performed 3/22/95.							
--	--	3/23-34	No sampling. No demolition work performed 3/23/95.							
--	--	3/24	PUF samples for this period were not selected for analysis.							
9513AP01	Station 1	3/27-28	88.6	0.677	48.0	0.367	ND	--	1.8	0.014
9513AP04	Station 4	3/27-28	73.6	0.296	40.0	0.161	ND	--	1.5	0.006

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/									
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
--	--	3/2-3	Previous sampling period extended to cover work during morning of 3/2/95.									
--	--	3/3	No sampling. Scheduled day off for contractor.									
--	--	3/6-7	PUF samples for this period were not selected for analysis.									
9510BP0	Station 1	3/7-8	1.8	0.015	2.4	0.020	6.5	0.053	ND	--	1.4	0.011
9510BP0	Station 2	3/7-8	1.0	0.005	1.4	0.007	2.7	0.014	ND	--	ND	--
--	--	3/8-9	No sampling. Limited dust-generating work performed on 3/8/95.									
--	--	3/9-10	No sampling. No demolition work performed 3/9/95.									
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.									
--	--	3/13-14	No sampling. Limited dust-generating work performed on 3/13/95.									
--	--	3/14-15	PUF samples for this period were not selected for analysis.									
9511CP0	Station 1	3/15-16	3.2	0.022	3.2	0.022	8.9	0.060	ND	--	1.4	0.010
9511CP0	Station 4	3/15-16	ND	--	ND	--	ND	--	ND	--	ND	--
9511DP0	Station 1	3/16-17	1.8	0.013	1.9	0.014	4.6	0.033	ND	--	ND	--
9511DP0	Station 4	3/16-17	ND	--	ND	--	1.8	0.006	ND	--	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.									
--	--	3/20-21	No sampling. No demolition work performed 3/20/95.									
9512BP0	Station 1	3/21-22	ND	--	ND	--	ND	--	ND	--	ND	--
9512BP0	Station 4	3/21-22	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	3/22-23	No sampling. No demolition work performed 3/22/95.									
--	--	3/23-34	No sampling. No demolition work performed 3/23/95.									
--	--	3/24	PUF samples for this period were not selected for analysis.									
9513AP0	Station 1	3/27-28	4.8	0.037	4.8	0.037	10.0	0.076	ND	--	1.8	0.014
9513AP0	Station 4	3/27-28	2.3	0.009	2.3	0.009	3.8	0.015	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	3/2-3	Previous sampling period extended to cover work during morning 3/2/95			
--	--	3/3	No sampling. Scheduled day off for contractor.			
--	--	3/6-7	PUF samples for this period were not selected for analysis.			
9510BP01	Station 1	3/7-8	ND	--	ND	--
9510BP02	Station 2	3/7-8	ND	--	ND	--
--	--	3/8-9	No sampling. Limited dust-generating work performed on 3/8/95.			
--	--	3/9-10	No sampling. No demolition work performed 3/9/95.			
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.			
--	--	3/13-14	No sampling. Limited dust-generating work performed on 3/13/95.			
--	--	3/14-15	PUF samples for this period were not selected for analysis.			
9511CP01	Station 1	3/15-16	ND	--	ND	--
9511CP04	Station 4	3/15-16	ND	--	ND	--
9511DP01	Station 1	3/16-17	ND	--	ND	--
9511DP04	Station 4	3/16-17	ND	--	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.			
--	--	3/20-21	No sampling. No demolition work performed 3/20/95.			
9512BP01	Station 1	3/21-22	ND	--	ND	--
9512BP04	Station 4	3/21-22	ND	--	ND	--
--	--	3/22-23	No sampling. No demolition work performed 3/22/95.			
--	--	3/23-34	No sampling. No demolition work performed 3/23/95.			
--	--	3/24	PUF samples for this period were not selected for analysis.			
9513AP01	Station 1	3/27-28	ND	--	ND	--
9513AP04	Station 4	3/27-28	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9513BP01	Station 1	3/28-29	1535	3.2	137	ND	--	ND	--	ND	--
9513BP04	Station 4	3/28-29	1515	5.7	243	ND	--	ND	--	ND	--
9513CP01	Station 1	3/29-30	1395	3.2	125	ND	--	ND	--	ND	--
9513CP04	Station 4	3/29-30	1410	6.2	249	ND	--	ND	--	ND	--
9513DP01	Station 1	3/30-31	1285	3.6	133	ND	--	ND	--	ND	--
9513DP02	Station 2	3/30-31	1270	4.9	176	ND	--	ND	--	ND	--
--	--	3/31/95	No sampling. Scheduled day off for contractor.								
9514AP01	Station 1	4/3-4	1495	4.4	188	ND	--	ND	--	ND	--
9514AP03	Station 3	4/3-4	1490	5.2	219	ND	--	ND	--	ND	--
9514BP01	Station 1	4/4-5	1475	4.7	197	ND	--	ND	--	ND	--
9514BP03	Station 3	4/4-5	1490	4.5	188	ND	--	ND	--	ND	--
9514CP01	Station 1	4/5-6	1405	4.6	183	ND	--	ND	--	ND	--
9514CP03	Station 3	4/5-6	1430	4.1	165	ND	--	ND	--	ND	--
--	--	4/6-7	PUF samples for this period were not selected for analysis.								
--	--	4/7	Previous sampling period extended to cover work during morning of 4/7/95.								
--	--	4/10-11	PUF samples for this period were not selected for analysis.								
--	--	4/11-12	No sampling. Limited dust-generating work performed on 4/11/95.								
9515CP01	Station 1	4/12-13	1420	4.6	185	ND	--	ND	--	ND	--
9515CP03	Station 3	4/12-13	1430	5.8	234	ND	--	ND	--	ND	--
9515DP01	Station 1	4/13-14	1465	4.5	185	ND	--	ND	--	ND	--
9515DP03	Station 3	4/13-14	1450	5.6	232	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Carcinogenic PAHs /a/									
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9513BP01	Station 1	3/28-29	ND	--	ND	--	ND	--	--
9513BP04	Station 4	3/28-29	ND	--	ND	--	ND	--	--
9513CP01	Station 1	3/29-30	ND	--	ND	--	ND	--	--
9513CP04	Station 4	3/29-30	ND	--	ND	--	ND	--	--
9513DP01	Station 1	3/30-31	ND	--	ND	--	ND	--	--
9513DP02	Station 2	3/30-31	ND	--	ND	--	ND	--	--
--	--	3/31/95	No sampling. Scheduled day off for contractor.						
9514AP01	Station 1	4/3-4	ND	--	ND	--	ND	--	--
9514AP03	Station 3	4/3-4	ND	--	ND	--	ND	--	--
9514BP01	Station 1	4/4-5	ND	--	ND	--	ND	--	--
9514BP03	Station 3	4/4-5	ND	--	ND	--	ND	--	--
9514CP01	Station 1	4/5-6	ND	--	ND	--	ND	--	--
9514CP03	Station 3	4/5-6	ND	--	ND	--	ND	--	--
--	--	4/6-7	PUF samples for this period were not selected for analysis.						
--	--	4/7	Previous sampling period extended to cover work during morning of 4/7/95.						
--	--	4/10-11	PUF samples for this period were not selected for analysis.						
--	--	4/11-12	No sampling. Limited dust-generating work performed on 4/11/95.						
9515CP01	Station 1	4/12-13	ND	--	ND	--	ND	--	--
9515CP03	Station 3	4/12-13	ND	--	ND	--	ND	--	--
9515DP01	Station 1	4/13-14	ND	--	ND	--	ND	--	--
9515DP03	Station 3	4/13-14	ND	--	ND	--	ND	--	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9513BP01	Station 1	3/28-29	43.6	0.317	25.0	0.182	ND	--	ND	--
9513BP04	Station 4	3/28-29	93.6	0.386	47.0	0.194	ND	--	ND	--
9513CP01	Station 1	3/29-30	62.8	0.502	28.0	0.224	ND	--	ND	--
9513CP04	Station 4	3/29-30	108.8	0.438	66.0	0.266	ND	--	ND	--
9513DP01	Station 1	3/30-31	63.8	0.480	26.0	0.196	ND	--	ND	--
9513DP02	Station 2	3/30-31	50.8	0.289	30.0	0.171	ND	--	ND	--
--	--	3/31/95	No sampling. Scheduled day off for contractor.							
9514AP01	Station 1	4/3-4	22.9	0.122	11.0	0.058	ND	--	ND	--
9514AP03	Station 3	4/3-4	59.9	0.273	22.0	0.100	ND	--	ND	--
9514BP01	Station 1	4/4-5	22.9	0.116	8.7	0.044	ND	--	ND	--
9514BP03	Station 3	4/4-5	23.9	0.127	9.4	0.050	ND	--	ND	--
9514CP01	Station 1	4/5-6	16.0	0.088	6.9	0.038	ND	--	ND	--
9514CP03	Station 3	4/5-6	24.0	0.145	8.4	0.051	ND	--	ND	--
--	--	4/6-7	PUF samples for this period were not selected for analysis.							
--	--	4/7	Previous sampling period extended to cover work during morning of 4/7/95.							
--	--	4/10-11	PUF samples for this period were not selected for analysis.							
--	--	4/11-12	No sampling. Limited dust-generating work performed on 4/11/95.							
9515CP01	Station 1	4/12-13	7.7	0.042	7.4	0.040	ND	--	ND	--
9515CP03	Station 3	4/12-13	12.7	0.054	9.1	0.039	ND	--	ND	--
9515DP01	Station 1	4/13-14	21.0	0.114	9.0	0.049	ND	--	ND	--
9515DP03	Station 3	4/13-14	36.0	0.155	10.0	0.043	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9513BP0	Station 1	3/28-29	6.5	0.047	7.1	0.052	21.0	0.153	1.2	0.009	4.0	0.029
9513BP0	Station 4	3/28-29	2.4	0.010	2.3	0.009	4.6	0.019	ND	--	ND	--
9513CP0	Station 1	3/29-30	4.4	0.035	4.7	0.038	17.0	0.136	1.2	0.010	2.8	0.022
9513CP0	Station 4	3/29-30	2.8	0.011	2.8	0.011	5.2	0.021	ND	--	ND	--
9513DP0	Station 1	3/30-31	3.1	0.023	3.4	0.026	9.7	0.073	ND	--	1.6	0.012
9513DP0	Station 2	3/30-31	1.5	0.009	1.8	0.010	3.4	0.019	ND	--	ND	--
--	--	3/31/95	No sampling. Scheduled day off for contractor.									
9514AP0	Station 1	4/3-4	ND	--	ND	--	1.7	0.009	ND	--	ND	--
9514AP0	Station 3	4/3-4	4.4	0.020	4.0	0.018	9.2	0.042	ND	--	1.8	0.008
9514BP0	Station 1	4/4-5	ND	--	ND	--	1.3	0.007	ND	--	ND	--
9514BP0	Station 3	4/4-5	1.3	0.007	1.2	0.006	3.0	0.016	ND	--	ND	--
9514CP0	Station 1	4/5-6	ND	--	ND	--	1.5	0.008	ND	--	ND	--
9514CP0	Station 3	4/5-6	1.6	0.010	1.4	0.008	3.1	0.019	ND	--	ND	--
--	--	4/6-7	PUF samples for this period were not selected for analysis.									
--	--	4/7	Previous sampling period extended to cover work during morning of 4/7/95.									
--	--	4/10-11	PUF samples for this period were not selected for analysis.									
--	--	4/11-12	No sampling. Limited dust-generating work performed on 4/11/95.									
9515CP0	Station 1	4/12-13	ND	--	ND	--	1.4	0.008	ND	--	ND	--
9515CP0	Station 3	4/12-13	ND	--	0.9	0.004	1.9	0.008	ND	--	ND	--
9515DP0	Station 1	4/13-14	ND	--	ND	--	1.4	0.008	ND	--	ND	--
9515DP0	Station 3	4/13-14	ND	--	ND	--	1.8	0.008	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9513BP01	Station 1	3/28-29	1.7	0.012	ND	--
9513BP04	Station 4	3/28-29	ND	--	ND	--
9513CP01	Station 1	3/29-30	1.4	0.011	ND	--
9513CP04	Station 4	3/29-30	ND	--	ND	--
9513DP01	Station 1	3/30-31	ND	--	ND	--
9513DP02	Station 2	3/30-31	ND	--	ND	--
--	--	3/31/95	No sampling. Scheduled day off for contractor.			
9514AP01	Station 1	4/3-4	ND	--	ND	--
9514AP03	Station 3	4/3-4	ND	--	ND	--
9514BP01	Station 1	4/4-5	ND	--	ND	--
9514BP03	Station 3	4/4-5	ND	--	ND	--
9514CP01	Station 1	4/5-6	ND	--	ND	--
9514CP03	Station 3	4/5-6	ND	--	ND	--
--	--	4/6-7	PUF samples for this period were not selected for analysis.			
--	--	4/7	Previous sampling period extended to cover work during morning of 4/7/95.			
--	--	4/10-11	PUF samples for this period were not selected for analysis.			
--	--	4/11-12	No sampling. Limited dust-generating work performed on 4/11/95.			
9515CP01	Station 1	4/12-13	ND	--	ND	--
9515CP03	Station 3	4/12-13	ND	--	ND	--
9515DP01	Station 1	4/13-14	ND	--	ND	--
9515DP03	Station 3	4/13-14	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
--	--	4/14	No sampling. Scheduled day off for contractor.								
--	--	4/17-18	PUF samples for this period were not selected for analysis.								
9516BP01	Station 1	4/18-19	1830	4.5	210	ND	--	ND	--	ND	--
9516BP03	Station 3	4/18-19	1835	6.5	299	ND	--	ND	--	ND	--
9516CP01	Station 1	4/19-20	1435	4.7	191	ND	--	ND	--	ND	--
9516CP02	Station 2	4/19-20	1440	5.0	204	ND	--	ND	--	ND	--
9516DP01	Station 1	4/20-21	1510	4.6	196	ND	--	ND	--	ND	--
9516DP04	Station 4	4/20-21	1515	5.7	245	ND	--	ND	--	ND	--
--	--	4/21	Previous sampling period extended to cover work during morning of 4/21/95.								
9517AP01	Station 1	4/24-25	1475	5.2	219	ND	--	ND	--	ND	--
9517AP03	Station 3	4/24-25	1480	6.0	253	ND	--	ND	--	ND	--
--	--	4/25-26	PUF samples for this period were not selected for analysis.								
9517CP01	Station 1	4/26-27	1350	4.8	182	ND	--	ND	--	ND	--
9517CP03	Station 3	4/26-27	1345	5.7	216	ND	--	ND	--	ND	--
--	--	4/27-28	PUF samples for this period were not selected for analysis.								
--	--	4/28	No sampling. Scheduled day off for contractor.								
--	--	5/1-2	PUF samples for this period were not selected for analysis.								
9518BP01	Station 1	5/2-3	1565	4.9	217	ND	--	ND	--	ND	--
9518BP03	Station 3	5/2-3	1555	4.9	216	ND	--	ND	--	ND	--
9518CP01	Station 1	5/3-4	1280	4.9	177	ND	--	ND	--	ND	--
9518CP03	Station 3	5/3-4	1280	5.9	214	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
--	--	4/14	No sampling. Scheduled day off for contractor.							
--	--	4/17-18	PUF samples for this period were not selected for analysis.							
9516BP01	Station 1	4/18-19	ND	--	ND	--	ND	--	ND	--
9516BP03	Station 3	4/18-19	ND	--	ND	--	ND	--	ND	--
9516CP01	Station 1	4/19-20	ND	--	ND	--	ND	--	ND	--
9516CP02	Station 2	4/19-20	ND	--	ND	--	ND	--	ND	--
9516DP01	Station 1	4/20-21	ND	--	ND	--	ND	--	ND	--
9516DP04	Station 4	4/20-21	ND	--	ND	--	ND	--	ND	--
--	--	4/21	Previous sampling period extended to cover work during morning of 4/21/95.							
9517AP01	Station 1	4/24-25	ND	--	ND	--	ND	--	ND	--
9517AP03	Station 3	4/24-25	ND	--	ND	--	ND	--	ND	--
--	--	4/25-26	PUF samples for this period were not selected for analysis.							
9517CP01	Station 1	4/26-27	ND	--	ND	--	ND	--	ND	--
9517CP03	Station 3	4/26-27	ND	--	ND	--	ND	--	ND	--
--	--	4/27-28	PUF samples for this period were not selected for analysis.							
--	--	4/28	No sampling. Scheduled day off for contractor.							
--	--	5/1-2	PUF samples for this period were not selected for analysis.							
9518BP01	Station 1	5/2-3	ND	--	ND	--	ND	--	ND	--
9518BP03	Station 3	5/2-3	ND	--	ND	--	ND	--	ND	--
9518CP01	Station 1	5/3-4	ND	--	ND	--	ND	--	ND	--
9518CP03	Station 3	5/3-4	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/										
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
--	--	4/14	No sampling. Scheduled day off for contractor.							
--	--	4/17-18	PUF samples for this period were not selected for analysis.							
9516BP01	Station 1	4/18-19	24.0	0.114	12.0	0.057	ND	--	ND	--
9516BP03	Station 3	4/18-19	23.0	0.077	12.0	0.040	ND	--	ND	--
9516CP01	Station 1	4/19-20	11.0	0.058	5.8	0.030	ND	--	ND	--
9516CP02	Station 2	4/19-20	11.0	0.054	5.3	0.026	ND	--	ND	--
9516DP01	Station 1	4/20-21	33.0	0.168	16.0	0.081	ND	--	ND	--
9516DP04	Station 4	4/20-21	26.0	0.106	12.0	0.049	ND	--	ND	--
--	--	4/21	Previous sampling period extended to cover work during morning of 4/21/95.							
9517AP01	Station 1	4/24-25	18.2	0.083	9.4	0.043	ND	--	ND	--
9517AP03	Station 3	4/24-25	20.2	0.080	9.8	0.039	ND	--	ND	--
--	--	4/25-26	PUF samples for this period were not selected for analysis.							
9517CP01	Station 1	4/26-27	16.8	0.092	9.9	0.054	ND	--	ND	--
9517CP03	Station 3	4/26-27	20.8	0.096	12.0	0.056	ND	--	ND	--
--	--	4/27-28	PUF samples for this period were not selected for analysis.							
--	--	4/28	No sampling. Scheduled day off for contractor.							
--	--	5/1-2	PUF samples for this period were not selected for analysis.							
9518BP01	Station 1	5/2-3	19.3	0.089	9.9	0.046	ND	--	ND	--
9518BP03	Station 3	5/2-3	24.3	0.112	11.0	0.051	ND	--	ND	--
9518CP01	Station 1	5/3-4	11.0	0.062	9.5	0.054	ND	--	ND	--
9518CP03	Station 3	5/3-4	13.0	0.061	9.7	0.045	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
--	--	4/14	No sampling. Scheduled day off for contractor.									
--	--	4/17-18	PUF samples for this period were not selected for analysis.									
9516BP0	Station 1	4/18-19	ND	--	ND	--	1.7	0.008	ND	--	ND	--
9516BP0	Station 3	4/18-19	ND	--	ND	--	2.1	0.007	ND	--	ND	--
9516CP0	Station 1	4/19-20	ND	--	ND	--	1.1	0.006	ND	--	ND	--
9516CP0	Station 2	4/19-20	ND	--	ND	--	1.1	0.005	ND	--	ND	--
9516DP0	Station 1	4/20-21	1.2	0.006	1.5	0.008	3.4	0.017	ND	--	ND	--
9516DP0	Station 4	4/20-21	ND	--	ND	--	2.2	0.009	ND	--	ND	--
--	--	4/21	Previous sampling period extended to cover work during morning of 4/21/95.									
9517AP0	Station 1	4/24-25	ND	--	ND	--	2.0	0.009	ND	--	ND	--
9517AP0	Station 3	4/24-25	1.4	0.006	1.4	0.006	4.0	0.016	ND	--	1.1	0.004
--	--	4/25-26	PUF samples for this period were not selected for analysis.									
9517CP0	Station 1	4/26-27	ND	--	ND	--	1.7	0.009	ND	--	ND	--
9517CP0	Station 3	4/26-27	1.3	0.006	1.3	0.006	3.2	0.015	ND	--	ND	--
--	--	4/27-28	PUF samples for this period were not selected for analysis.									
--	--	4/28	No sampling. Scheduled day off for contractor.									
--	--	5/1-2	PUF samples for this period were not selected for analysis.									
9518BP0	Station 1	5/2-3	ND	--	ND	--	1.6	0.007	ND	--	ND	--
9518BP0	Station 3	5/2-3	1.2	0.006	1.2	0.006	3.6	0.017	ND	--	ND	--
9518CP0	Station 1	5/3-4	ND	--	ND	--	1.5	0.008	ND	--	ND	--
9518CP0	Station 3	5/3-4	ND	--	1.1	0.005	3.7	0.017	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/			
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	4/14	No sampling. Scheduled day off for contractor. PUF samples for this period were not selected for analysis.			
--	--	4/17-18				
9516BP01	Station 1	4/18-19	ND	--	ND	--
9516BP03	Station 3	4/18-19	ND	--	ND	--
9516CP01	Station 1	4/19-20	ND	--	ND	--
9516CP02	Station 2	4/19-20	ND	--	ND	--
9516DP01	Station 1	4/20-21	ND	--	ND	--
9516DP04	Station 4	4/20-21	ND	--	ND	--
--	--	4/21	Previous sampling period extended to cover work during morning of 4/21/95.			
9517AP01	Station 1	4/24-25	ND	--	ND	--
9517AP03	Station 3	4/24-25	ND	--	ND	--
--	--	4/25-26	PUF samples for this period were not selected for analysis.			
9517CP01	Station 1	4/26-27	ND	--	ND	--
9517CP03	Station 3	4/26-27	ND	--	ND	--
--	--	4/27-28	PUF samples for this period were not selected for analysis.			
--	--	4/28	No sampling. Scheduled day off for contractor.			
--	--	5/1-2	PUF samples for this period were not selected for analysis.			
9518BP01	Station 1	5/2-3	ND	--	ND	--
9518BP03	Station 3	5/2-3	ND	--	ND	--
9518CP01	Station 1	5/3-4	ND	--	ND	--
9518CP03	Station 3	5/3-4	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9518EP01/c	Station 1	5/5	415	4.6	54	ND	--	ND	--	ND	--
9518EP03/c	Station 3	5/5	410	6.2	72	ND	--	ND	--	ND	--
--	--	5/8	PUF samples for this period were not selected for analysis.								
--	--	5/9	PUF samples for this period were not selected for analysis.								
519CP01/c	Station 1	5/10	460	5.3	69	ND	--	ND	--	ND	--
9519CP04	Station 4	5/10	475	5.5	74	ND	--	ND	--	ND	--
519DP01/c	Station 1	5/11	455	5.6	72	ND	--	ND	--	ND	--
9519DP04	Station 4	5/11	445	5.2	65	ND	--	ND	--	ND	--
--	--	5/12	No sampling. Scheduled day off for contractor.								
--	--	5/15	PUF samples for this period were not selected for analysis.								
9520BP01	Station 1	5/16	460	5.7	74	ND	--	ND	--	ND	--
9520BP02	Station 2	5/16	485	7.7	106	ND	--	ND	--	ND	--
520CP01/c	Station 1	5/17	435	6.3	78	ND	--	ND	--	ND	--
9520CP03	Station 3	5/17	450	6.0	76	ND	--	ND	--	ND	--
--	--	5/18	PUF samples for this period were not selected for analysis.								
9520EP01	Station 1	5/19	425	5.8	70	ND	--	ND	--	ND	--
9520EP04	Station 4	5/19	415	5.5	64	ND	--	ND	--	ND	--
--	--	5/22	PUF samples for this period were not selected for analysis.								
9521BP01	Station 1	5/23	430	5.2	63	ND	--	ND	--	ND	--
9521BP03	Station 3	5/23	455	5.9	76	ND	--	ND	--	1.4	0.018
9521BP04	Station 4	5/23	460	5.3	69	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne deno(1,2,3-cd)-pyrene Concentration (µg/m³)
518EP01/	Station 1	5/5	ND	--	ND	--	ND	--	ND	--
518EP03/	Station 3	5/5	ND	--	ND	--	ND	--	ND	--
--	--	5/8	PUF samples for this period were not selected for analysis.							
--	--	5/9	PUF samples for this period were not selected for analysis.							
519CP01/	Station 1	5/10	ND	--	ND	--	ND	--	ND	--
9519CP04	Station 4	5/10	ND	--	ND	--	ND	--	ND	--
519DP01/	Station 1	5/11	ND	--	ND	--	ND	--	ND	--
9519DP04	Station 4	5/11	ND	--	ND	--	ND	--	ND	--
--	--	5/12	No sampling. Scheduled day off for contractor.							
--	--	5/15	PUF samples for this period were not selected for analysis.							
9520BP01	Station 1	5/16	ND	--	ND	--	ND	--	ND	--
9520BP02	Station 2	5/16	ND	--	ND	--	ND	--	ND	--
520CP01/	Station 1	5/17	ND	--	ND	--	ND	--	ND	--
9520CP03	Station 3	5/17	ND	--	ND	--	ND	--	ND	--
--	--	5/18	PUF samples for this period were not selected for analysis.							
9520EP01	Station 1	5/19	ND	--	ND	--	ND	--	ND	--
9520EP04	Station 4	5/19	ND	--	ND	--	ND	--	ND	--
--	--	5/22	PUF samples for this period were not selected for analysis.							
9521BP01	Station 1	5/23	ND	--	ND	--	ND	--	ND	--
9521BP03	Station 3	5/23	ND	--	1.2	0.016	ND	--	ND	--
9521BP04	Station 4	5/23	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Picking and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
518EP01/c	Station 1	5/5	5.6	0.104	2.2	0.041	ND	--	ND	--
518EP03/c	Station 3	5/5	7.5	0.104	2.9	0.040	ND	--	ND	--
--	--	5/8	PUF samples for this period were not selected for analysis.							
--	--	5/9	PUF samples for this period were not selected for analysis.							
519CP01/c	Station 1	5/10	15.0	0.217	4.8	0.069	ND	--	ND	--
9519CP04	Station 4	5/10	37.0	0.500	9.0	0.122	ND	--	ND	--
519DP01/c	Station 1	5/11	12.0	0.166	3.0	0.041	ND	--	ND	--
9519DP04	Station 4	5/11	8.0	0.122	2.9	0.044	ND	--	ND	--
--	--	5/12	No sampling. Scheduled day off for contractor.							
--	--	5/15	PUF samples for this period were not selected for analysis.							
9520BP01	Station 1	5/16	3.6	0.049	5.1	0.069	ND	--	ND	--
9520BP02	Station 2	5/16	17.6	0.166	7.3	0.069	ND	--	ND	--
520CP01/c	Station 1	5/17	5.9	0.076	2.1	0.027	ND	--	ND	--
9520CP03	Station 3	5/17	0.6	0.008	3.0	0.039	ND	--	ND	--
--	--	5/18	PUF samples for this period were not selected for analysis.							
9520EP01	Station 1	5/19	12.3	0.177	6.8	0.098	ND	--	ND	--
9520EP04	Station 4	5/19	9.3	0.145	4.6	0.072	ND	--	ND	--
--	--	5/22	PUF samples for this period were not selected for analysis.							
9521BP01	Station 1	5/23	10.3	0.164	4.4	0.070	ND	--	ND	--
9521BP03	Station 3	5/23	13.3	0.176	12.0	0.159	ND	--	ND	--
9521BP04	Station 4	5/23	14.3	0.209	7.0	0.102	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne
			Acenaphthene (µg)	Acenaphthene Concentration (µg/m³)	Fluorene (µg)	Fluorene Concentration (µg/m³)	Phenanthrene (µg)	Phenanthrene Concentration (µg/m³)	Anthracene (µg)	Anthracene Concentration (µg/m³)	Fluoranthene (µg)	Fluoranthene Concentration (µg/m³)
518EP01/	Station 1	5/5	ND	--	ND	--	ND	--	ND	--	ND	--
518EP03/	Station 3	5/5	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	5/8	PUF samples for this period were not selected for analysis.									
--	--	5/9	PUF samples for this period were not selected for analysis.									
519CP01/	Station 1	5/10	ND	--	ND	--	ND	--	ND	--	ND	--
9519CP0	Station 4	5/10	ND	--	ND	--	ND	--	ND	--	ND	--
519DP01/	Station 1	5/11	ND	--	ND	--	ND	--	ND	--	ND	--
9519DP0	Station 4	5/11	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	5/12	No sampling. Scheduled day off for contractor.									
--	--	5/15	PUF samples for this period were not selected for analysis.									
9520BP0	Station 1	5/16	ND	--	ND	--	1.1	0.015	ND	--	ND	--
9520BP0	Station 2	5/16	4.7	0.044	4.0	0.038	8.6	0.081	1.0	0.009	ND	--
520CP01/	Station 1	5/17	ND	--	ND	--	ND	--	ND	--	ND	--
9520CP0	Station 3	5/17	ND	--	ND	--	1.2	0.016	ND	--	ND	--
--	--	5/18	PUF samples for this period were not selected for analysis.									
9520EP0	Station 1	5/19	ND	--	ND	--	1.3	0.019	ND	--	ND	--
9520EP0	Station 4	5/19	ND	--	ND	--	1.2	0.019	ND	--	ND	--
--	--	5/22	PUF samples for this period were not selected for analysis.									
9521BP0	Station 1	5/23	ND	--	ND	--	ND	--	ND	--	ND	--
9521BP0	Station 3	5/23	1.5	0.020	1.4	0.018	4.6	0.061	ND	--	3.9	0.052
9521BP0	Station 4	5/23	ND	--	ND	--	1.7	0.025	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/			
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9518EP01/c/	Station 1	5/5	ND	--	ND	--
9518EP03/c/	Station 3	5/5	ND	--	ND	--
--	--	5/8	PUF samples for this period were not selected for analysis.			
--	--	5/9	PUF samples for this period were not selected for analysis.			
9519CP01/c/	Station 1	5/10	ND	--	ND	--
9519CP04	Station 4	5/10	ND	--	ND	--
9519DP01/c/	Station 1	5/11	ND	--	ND	--
9519DP04	Station 4	5/11	ND	--	ND	--
--	--	5/12	No sampling. Scheduled day off for contractor.			
--	--	5/15	PUF samples for this period were not selected for analysis.			
9520BP01	Station 1	5/16	ND	--	ND	--
9520BP02	Station 2	5/16	ND	--	ND	--
9520CP01/c/	Station 1	5/17	ND	--	ND	--
9520CP03	Station 3	5/17	ND	--	ND	--
--	--	5/18	PUF samples for this period were not selected for analysis.			
9520EP01	Station 1	5/19	ND	--	ND	--
9520EP04	Station 4	5/19	ND	--	ND	--
--	--	5/22	PUF samples for this period were not selected for analysis.			
9521BP01	Station 1	5/23	ND	--	ND	--
9521BP03	Station 3	5/23	2.8	0.037	ND	--
9521BP04	Station 4	5/23	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9521CP01	Station 1	5/24	470	5.7	76	ND	--	ND	--	ND	--
9521CP03	Station 3	5/24	480	7.0	95	ND	--	ND	--	ND	--
--	--	5/25	PUF samples for this period were not selected for analysis.								
--	--	5/26	No sampling. Scheduled day off for contractor.								
--	--	5/29	No sampling. Memorial Day holiday.								
9522AP01	Station 1	5/30	455	5.9	76	ND	--	ND	--	ND	--
9522AP04	Station 4	5/30	455	5.6	72	ND	--	ND	--	ND	--
9522BP01	Station 1	5/31	475	5.4	72	ND	--	ND	--	ND	--
9522BP04	Station 4	5/31	490	4.7	65	ND	--	ND	--	ND	--
--	--	6/1	PUF samples for this period were not selected for analysis.								
9522DP01	Station 1	6/2	400	6.0	68	ND	--	ND	--	ND	--
9522DP04	Station 4	6/2	400	6.5	74	ND	--	ND	--	ND	--
9523AP01	Station 1	6/5	455	6.0	77	ND	--	ND	--	ND	--
9523AP02	Station 2	6/5	450	5.6	71	ND	--	ND	--	ND	--
9523BP01	Station 1	6/6	435	6.6	81	ND	--	ND	--	ND	--
9523BP03	Station 3	6/6	440	8.4	105	ND	--	ND	--	ND	--
--	--	6/7	No sampling. Sampling media for TSP/metals not available due to laboratory error.								
9523DP01	Station 1	6/8	515	6.1	89	ND	--	ND	--	ND	--
9523DP03	Station 3	6/8	463	10.2	134	ND	--	ND	--	ND	--
--	--	6/9	No sampling. Scheduled day off for contractor.								
--	--	6/12	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)- fluoranthene (µg)	Airborne Benzo(k)- fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)- anthracene (µg)	Airborne Dibenz(a,h)- anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)- pyrene (µg)	Airborne Ideno(1,2,3-cd)- pyrene Concentration (µg/m³)
9521CP01	Station 1	5/24	ND	--	ND	--	ND	--	ND	--
9521CP03	Station 3	5/24	ND	--	ND	--	ND	--	ND	--
--	--	5/25	PUF samples for this period were not selected for analysis.							
--	--	5/26	No sampling. Scheduled day off for contractor.							
--	--	5/29	No sampling. Memorial Day holiday.							
9522AP01	Station 1	5/30	ND	--	ND	--	ND	--	ND	--
9522AP04	Station 4	5/30	ND	--	ND	--	ND	--	ND	--
9522BP01	Station 1	5/31	ND	--	ND	--	ND	--	ND	--
9522BP04	Station 4	5/31	ND	--	ND	--	ND	--	ND	--
--	--	6/1	PUF samples for this period were not selected for analysis.							
9522DP01	Station 1	6/2	ND	--	ND	--	ND	--	ND	--
9522DP04	Station 4	6/2	ND	--	ND	--	ND	--	ND	--
9523AP01	Station 1	6/5	ND	--	ND	--	ND	--	ND	--
9523AP02	Station 2	6/5	ND	--	ND	--	ND	--	ND	--
9523BP01	Station 1	6/6	ND	--	ND	--	ND	--	ND	--
9523BP03	Station 3	6/6	ND	--	ND	--	ND	--	ND	--
--	--	6/7	No sampling. Sampling media for TSP/metals not available due to laboratory error.							
9523DP01	Station 1	6/8	ND	--	ND	--	ND	--	ND	--
9523DP03	Station 3	6/8	ND	--	ND	--	ND	--	ND	--
--	--	6/9	No sampling. Scheduled day off for contractor.							
--	--	6/12	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9521CP01	Station 1	5/24	13.0	0.171	2.3	0.030	ND	--	ND	--
9521CP03	Station 3	5/24	14.0	0.147	2.9	0.030	ND	--	ND	--
--	--	5/25	PUF samples for this period were not selected for analysis.							
--	--	5/26	No sampling. Scheduled day off for contractor.							
--	--	5/29	No sampling. Memorial Day holiday.							
9522AP01	Station 1	5/30	23.0	0.302	7.2	0.094	ND	--	ND	--
9522AP04	Station 4	5/30	17.0	0.237	5.2	0.072	ND	--	ND	--
9522BP01	Station 1	5/31	32.0	0.444	14.0	0.194	ND	--	ND	--
9522BP04	Station 4	5/31	24.0	0.371	11.0	0.170	ND	--	ND	--
--	--	6/1	PUF samples for this period were not selected for analysis.							
9522DP01	Station 1	6/2	5.8	0.085	2.5	0.037	ND	--	ND	--
9522DP04	Station 4	6/2	2.2	0.030	2.0	0.027	ND	--	ND	--
9523AP01	Station 1	6/5	9.5	0.123	5.0	0.065	ND	--	ND	--
9523AP02	Station 2	6/5	9.5	0.133	7.5	0.105	ND	--	ND	--
9523BP01	Station 1	6/6	8.7	0.108	5.0	0.062	ND	--	ND	--
9523BP03	Station 3	6/6	6.7	0.064	4.2	0.040	ND	--	ND	--
--	--	6/7	No sampling. Sampling media for TSP/metals not available due to laboratory error.							
9523DP01	Station 1	6/8	11.2	0.126	5.3	0.060	ND	--	ND	--
9523DP03	Station 3	6/8	10.2	0.076	4.3	0.032	ND	--	ND	--
--	--	6/9	No sampling. Scheduled day off for contractor.							
--	--	6/12	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9521CP0	Station 1	5/24	ND	--	ND	--	ND	--	ND	--	ND	--
9521CP0	Station 3	5/24	ND	--	ND	--	2.4	0.025	ND	--	ND	--
--	--	5/25	PUF samples for this period were not selected for analysis.									
--	--	5/26	No sampling. Scheduled day off for contractor.									
--	--	5/29	No sampling. Memorial Day holiday.									
9522AP0	Station 1	5/30	ND	--	ND	--	ND	--	ND	--	ND	--
9522AP0	Station 4	5/30	ND	--	ND	--	1.2	0.017	ND	--	ND	--
9522BP0	Station 1	5/31	2.5	0.035	3.3	0.046	8.8	0.122	ND	--	1.6	0.022
9522BP0	Station 4	5/31	ND	--	1.2	0.019	3.5	0.054	ND	--	ND	--
--	--	6/1	PUF samples for this period were not selected for analysis.									
9522DP0	Station 1	6/2	ND	--	ND	--	ND	--	ND	--	ND	--
9522DP0	Station 4	6/2	ND	--	ND	--	ND	--	ND	--	ND	--
9523AP0	Station 1	6/5	ND	--	ND	--	ND	--	ND	--	ND	--
9523AP0	Station 2	6/5	2.0	0.028	2.8	0.039	7.5	0.105	ND	--	1.0	0.014
9523BP0	Station 1	6/6	ND	--	ND	--	ND	--	ND	--	ND	--
9523BP0	Station 3	6/6	ND	--	ND	--	2.6	0.025	ND	--	ND	--
--	--	6/7	No sampling. Sampling media for TSP/metals not available due to laboratory error.									
9523DP0	Station 1	6/8	ND	--	ND	--	1.2	0.014	ND	--	ND	--
9523DP0	Station 3	6/8	ND	--	ND	--	2.2	0.016	ND	--	ND	--
--	--	6/9	No sampling. Scheduled day off for contractor.									
--	--	6/12	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/					
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9521CP01	Station 1	5/24	ND	--	ND
9521CP03	Station 3	5/24	ND	--	ND
--	--	5/25	PUF samples for this period were not selected for analysis.		
--	--	5/26	No sampling. Scheduled day off for contractor.		
--	--	5/29	No sampling. Memorial Day holiday.		
9522AP01	Station 1	5/30	ND	--	ND
9522AP04	Station 4	5/30	ND	--	ND
9522BP01	Station 1	5/31	ND	--	ND
9522BP04	Station 4	5/31	ND	--	ND
--	--	6/1	PUF samples for this period were not selected for analysis.		
9522DP01	Station 1	6/2	ND	--	ND
9522DP04	Station 4	6/2	ND	--	ND
9523AP01	Station 1	6/5	ND	--	ND
9523AP02	Station 2	6/5	ND	--	ND
9523BP01	Station 1	6/6	ND	--	ND
9523BP03	Station 3	6/6	ND	--	ND
--	--	6/7	No sampling. Sampling media for TSP/metals not available due to laboratory error.		
9523DP01	Station 1	6/8	ND	--	ND
9523DP03	Station 3	6/8	ND	--	ND
--	--	6/9	No sampling. Scheduled day off for contractor.		
--	--	6/12	PUF samples for this period were not selected for analysis.		

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9524BP01	Station 1	6/13	490	6.1	84	ND	--	ND	--	ND	--
524BP03/c	Station 3	6/13	493	8.8	123	ND	--	ND	--	ND	--
--	--	6/14	PUF samples for this period were not selected for analysis.								
9524DP01	Station 1	6/15	480	6.7	92	ND	--	ND	--	ND	--
9524DP02	Station 2	6/15	474	6.9	92	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	--	ND	--	ND	--	ND	--
9530AP01	Station 1	7/24	495	6.3	89	ND	--	ND	--	ND	--
9530AP04	Station 4	7/24	492	5.7	80	ND	--	ND	--	ND	--
--	--	7/25	PUF samples for this period were not selected for analysis.								
--	--	7/26	PUF samples for this period were not selected for analysis.								
9530DP01	Station 1	7/27	468	5.5	73	ND	--	ND	--	ND	--
9530DP02	Station 2	7/27	467	4.9	65	ND	--	ND	--	ND	--
9530EP01	Station 1	7/28	478	5.5	75	ND	--	ND	--	ND	--
9530EP02	Station 2	7/28	479	6.3	85	ND	--	ND	--	ND	--
9531AP01	Station 1	7/31	414	7.1	83	ND	--	ND	--	ND	--
9531AP04	Station 4	7/31	418	4.6	55	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9524BP01	Station 1	6/13	ND	--	ND	--	ND	--	ND	--
524BP03/	Station 3	6/13	ND	--	ND	--	ND	--	ND	--
--	--	6/14	PUF samples for this period were not selected for analysis.							
9524DP01	Station 1	6/15	ND	--	ND	--	ND	--	ND	--
9524DP02	Station 2	6/15	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--
9530AP01	Station 1	7/24	ND	--	ND	--	ND	--	ND	--
9530AP04	Station 4	7/24	ND	--	ND	--	ND	--	ND	--
--	--	7/25	PUF samples for this period were not selected for analysis.							
--	--	7/26	PUF samples for this period were not selected for analysis.							
9530DP01	Station 1	7/27	ND	--	ND	--	ND	--	ND	--
9530DP02	Station 2	7/27	ND	--	ND	--	ND	--	ND	--
9530EP01	Station 1	7/28	ND	--	ND	--	ND	--	ND	--
9530EP02	Station 2	7/28	ND	--	ND	--	ND	--	ND	--
9531AP01	Station 1	7/31	ND	--	ND	--	ND	--	ND	--
9531AP04	Station 4	7/31	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9524BP01	Station 1	6/13	43.0	0.509	9.1	0.108	ND	--	ND	--
524BP03/c	Station 3	6/13	15.0	0.122	5.6	0.046	ND	--	ND	--
--	--	6/14	PUF samples for this period were not selected for analysis.							
9524DP01	Station 1	6/15	8.4	0.092	3.5	0.038	ND	--	ND	--
9524DP02	Station 2	6/15	7.8	0.085	4.9	0.053	ND	--	ND	--
Blank	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	2.5	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	ND	--	ND	--	ND	--
Blank	--	--	1.8	--	ND	--	ND	--	ND	--
Blank	--	--	15.0	--	ND	--	ND	--	ND	--
Blank	--	--	--	--	ND	--	ND	--	ND	--
9530AP01	Station 1	7/24	3.6	0.041	3.8	0.043	ND	--	ND	--
9530AP04	Station 4	7/24	18.6	0.234	6.2	0.078	ND	--	ND	--
--	--	7/25	PUF samples for this period were not selected for analysis.							
--	--	7/26	PUF samples for this period were not selected for analysis.							
9530DP01	Station 1	7/27	27.6	0.378	16.0	0.219	ND	--	ND	--
9530DP02	Station 2	7/27	29.6	0.457	17.0	0.263	ND	--	ND	--
9530EP01	Station 1	7/28	10.0	0.134	5.3	0.071	ND	--	ND	--
9530EP02	Station 2	7/28	13.0	0.152	6.6	0.077	ND	--	ND	--
9531AP01	Station 1	7/31	33.0	0.396	18.0	0.216	ND	--	ND	--
9531AP04	Station 4	7/31	99.0	1.813	44.0	0.806	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/									
Sample Number	Location	Sampling End Date	Total Acenaphthene (μg)	Airborne Acenaphthene Concentration ($\mu\text{g}/\text{m}^3$)	Total Fluorene (μg)	Airborne Fluorene Concentration ($\mu\text{g}/\text{m}^3$)	Total Phenanthrene (μg)	Airborne Phenanthrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Anthracene (μg)	Airborne Anthracene Concentration ($\mu\text{g}/\text{m}^3$)	Total Fluoranthene (μg)	Airborne Fluoranthene Concentration ($\mu\text{g}/\text{m}^3$)
9524BP0	Station 1	6/13	ND	--	ND	--	ND	--	ND	--	ND	--
524BP03/	Station 3	6/13	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	6/14	PUF samples for this period were not selected for analysis.									
9524DP0	Station 1	6/15	ND	--	ND	--	ND	--	ND	--	ND	--
9524DP0	Station 2	6/15	ND	--	1.0	0.011	3.7	0.040	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
9530AP0	Station 1	7/24	ND	--	ND	--	ND	--	ND	--	ND	--
9530AP0	Station 4	7/24	4.5	0.057	3.2	0.040	4.8	0.060	ND	--	ND	--
--	--	7/25	PUF samples for this period were not selected for analysis.									
--	--	7/26	PUF samples for this period were not selected for analysis.									
9530DP0	Station 1	7/27	1.2	0.016	1.5	0.021	3.2	0.044	ND	--	ND	--
9530DP0	Station 2	7/27	3.7	0.057	4.1	0.063	8.9	0.137	ND	--	1.4	0.022
9530EP0	Station 1	7/28	ND	--	ND	--	ND	--	ND	--	ND	--
9530EP0	Station 2	7/28	1.4	0.016	1.6	0.019	4.3	0.050	ND	--	ND	--
9531AP0	Station 1	7/31	2.8	0.034	2.9	0.035	6.8	0.082	ND	--	1.1	0.013
9531AP0	Station 4	7/31	39.0	0.714	35.0	0.641	44.0	0.806	11.0	0.201	6.6	0.121

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Picking and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/					
Sample Number	Location	Sampling End Date	Total Pyrene (µg)	Airborne Pyrene Concentration (µg/m³)	Airborne Benzo(g,h,i)-perylene Concentration (µg/m³)
9524BP01	Station 1	6/13	ND	--	ND
9524BP03/c/	Station 3	6/13	ND	--	ND
--	--	6/14	PUF samples for this period were not selected for analysis.		
9524DP01	Station 1	6/15	ND	--	ND
9524DP02	Station 2	6/15	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
Blank	--	--	ND	--	ND
9530AP01	Station 1	7/24	ND	--	ND
9530AP04	Station 4	7/24	ND	--	ND
--	--	7/25	PUF samples for this period were not selected for analysis.		
--	--	7/26	PUF samples for this period were not selected for analysis.		
9530DP01	Station 1	7/27	ND	--	ND
9530DP02	Station 2	7/27	ND	--	ND
9530EP01	Station 1	7/28	ND	--	ND
9530EP02	Station 2	7/28	ND	--	ND
9531AP01	Station 1	7/31	ND	--	ND
9531AP04	Station 4	7/31	3.4	0.062	ND

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
--	--	6/16	No sampling. No activities in exclusion zone due to rain.								
--	--	6/19	No sampling. Power outage over entire site.								
--	--	6/20	No sampling. Power outage over entire site.								
--	--	6/21	No sampling. Power outage over entire site.								
--	--	6/22	No sampling. Power outage over entire site.								
--	--	6/23	No sampling. Scheduled day off for contractor.								
9526AP01	Station 1	6/26	460	5.9	77	ND	--	ND	--	ND	--
9526AP02	Station 2	6/26	452	6.6	84	ND	--	ND	--	ND	--
--	--	6/27	PUF samples for this period were not selected for analysis.								
--	--	6/28	PUF samples for this period were not selected for analysis.								
9526DP01	Station 1	6/29	457	6.1	80	ND	--	ND	--	ND	--
9526DP02	Station 2	6/29	450	5.7	72	ND	--	ND	--	ND	--
9526EP01	Station 1	6/30	260	5.6	41	ND	--	ND	--	ND	--
9526EP02	Station 2	6/30	260	6.6	48	ND	--	ND	--	ND	--
--	--	7/3	PUF samples for this period were not selected for analysis.								
--	--	7/4	No sampling. Holiday.								
--	--	7/5	PUF samples for this period were not selected for analysis.								
9527DP01	Station 1	7/6	440	6.1	77	ND	--	ND	--	ND	--
9527DP03	Station 3	7/6	441	9.0	112	ND	--	ND	--	ND	--
--	--	7/7	No sampling. Scheduled day off for contractor.								
9528AP01	Station 1	7/10	500	6.7	96	ND	--	ND	--	ND	--
9528AP04	Station 4	7/10	381	6.0	65	ND	--	ND	--	ND	--
--	--	7/11	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenzo(a,h)-anthracene (µg)	Airborne Dibenzo(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
--	--	6/16	No sampling. No activities in exclusion zone due to rain.							
--	--	6/19	No sampling. Power outage over entire site.							
--	--	6/20	No sampling. Power outage over entire site.							
--	--	6/21	No sampling. Power outage over entire site.							
--	--	6/22	No sampling. Power outage over entire site.							
--	--	6/23	No sampling. Scheduled day off for contractor.							
9526AP01	Station 1	6/26	ND	--	ND	--	ND	--	ND	--
9526AP02	Station 2	6/26	ND	--	ND	--	ND	--	ND	--
--	--	6/27	PUF samples for this period were not selected for analysis.							
--	--	6/28	PUF samples for this period were not selected for analysis.							
9526DP01	Station 1	6/29	ND	--	ND	--	ND	--	ND	--
9526DP02	Station 2	6/29	ND	--	ND	--	ND	--	ND	--
9526EP01	Station 1	6/30	ND	--	ND	--	ND	--	ND	--
9526EP02	Station 2	6/30	ND	--	ND	--	ND	--	ND	--
--	--	7/3	PUF samples for this period were not selected for analysis.							
--	--	7/4	No sampling. Holiday.							
--	--	7/5	PUF samples for this period were not selected for analysis.							
9527DP01	Station 1	7/6	ND	--	ND	--	ND	--	ND	--
9527DP03	Station 3	7/6	ND	--	ND	--	ND	--	ND	--
--	--	7/7	No sampling. Scheduled day off for contractor.							
9528AP01	Station 1	7/10	ND	--	ND	--	ND	--	ND	--
9528AP04	Station 4	7/10	ND	--	ND	--	ND	--	ND	--
--	--	7/11	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
--	--	6/16	No sampling. No activities in exclusion zone due to rain.							
--	--	6/19	No sampling. Power outage over entire site.							
--	--	6/20	No sampling. Power outage over entire site.							
--	--	6/21	No sampling. Power outage over entire site.							
--	--	6/22	No sampling. Power outage over entire site.							
--	--	6/23	No sampling. Scheduled day off for contractor.							
9526AP01	Station 1	6/26	16.0	0.208	6.0	0.078	ND	--	ND	--
9526AP02	Station 2	6/26	59.0	0.699	15.0	0.178	ND	--	ND	--
--	--	6/27	PUF samples for this period were not selected for analysis.							
--	--	6/28	PUF samples for this period were not selected for analysis.							
9526DP01	Station 1	6/29	6.3	0.079	3.0	0.038	ND	--	ND	--
9526DP02	Station 2	6/29	20.0	0.277	7.3	0.101	ND	--	ND	--
9526EP01	Station 1	6/30	11.0	0.268	1.6	0.039	ND	--	ND	--
9526EP02	Station 2	6/30	13.0	0.269	2.6	0.054	ND	--	ND	--
--	--	7/3	PUF samples for this period were not selected for analysis.							
--	--	7/4	No sampling. Holiday.							
--	--	7/5	PUF samples for this period were not selected for analysis.							
9527DP01	Station 1	7/6	7.5	0.098	3.6	0.047	ND	--	ND	--
9527DP03	Station 3	7/6	8.5	0.076	3.1	0.028	ND	--	ND	--
--	--	7/7	No sampling. Scheduled day off for contractor.							
9528AP01	Station 1	7/10	5.4	0.057	2.2	0.023	ND	--	ND	--
9528AP04	Station 4	7/10	5.9	0.090	2.5	0.038	ND	--	ND	--
--	--	7/11	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/									
Sample Number	Location	Sampling End Date	Total Acenaphthene (μg)	Airborne Acenaphthene Concentration ($\mu\text{g}/\text{m}^3$)	Total Fluorene (μg)	Airborne Fluorene Concentration ($\mu\text{g}/\text{m}^3$)	Total Phenanthrene (μg)	Airborne Phenanthrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Anthracene (μg)	Airborne Anthracene Concentration ($\mu\text{g}/\text{m}^3$)	Total Fluoranthene (μg)	Airborne Fluoranthene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	6/16	No sampling. No activities in exclusion zone due to rain.									
--	--	6/19	No sampling. Power outage over entire site.									
--	--	6/20	No sampling. Power outage over entire site.									
--	--	6/21	No sampling. Power outage over entire site.									
--	--	6/22	No sampling. Power outage over entire site.									
--	--	6/23	No sampling. Scheduled day off for contractor.									
9526AP0	Station 1	6/26	ND	--	ND	--	1.3	0.017	ND	--	ND	--
9526AP0	Station 2	6/26	13.0	0.154	12	0.142	19.0	0.225	2.4	0.028	ND	--
--	--	6/27	PUF samples for this period were not selected for analysis.									
--	--	6/28	PUF samples for this period were not selected for analysis.									
9526DP0	Station 1	6/29	ND	--	ND	--	ND	--	ND	--	ND	--
9526DP0	Station 2	6/29	2.8	0.039	2.9	0.040	6.1	0.084	ND	--	ND	--
9526EP0	Station 1	6/30	ND	--	ND	--	ND	--	ND	--	ND	--
9526EP0	Station 2	6/30	ND	--	ND	--	1.9	0.039	ND	--	ND	--
--	--	7/3	PUF samples for this period were not selected for analysis.									
--	--	7/4	No sampling. Holiday.									
--	--	7/5	PUF samples for this period were not selected for analysis.									
9527DP0	Station 1	7/6	ND	--	ND	--	ND	--	ND	--	ND	--
9527DP0	Station 3	7/6	ND	--	ND	--	1.7	0.015	ND	--	ND	--
--	--	7/7	No sampling. Scheduled day off for contractor.									
9528AP0	Station 1	7/10	ND	--	ND	--	ND	--	ND	--	ND	--
9528AP0	Station 4	7/10	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	7/11	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/			
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	6/16	No sampling. No activities in exclusion zone due to rain.			
--	--	6/19	No sampling. Power outage over entire site.			
--	--	6/20	No sampling. Power outage over entire site.			
--	--	6/21	No sampling. Power outage over entire site.			
--	--	6/22	No sampling. Power outage over entire site.			
--	--	6/23	No sampling. Scheduled day off for contractor.			
9526AP01	Station 1	6/26	ND	--	ND	--
9526AP02	Station 2	6/26	ND	--	ND	--
--	--	6/27	PUF samples for this period were not selected for analysis.			
--	--	6/28	PUF samples for this period were not selected for analysis.			
9526DP01	Station 1	6/29	ND	--	ND	--
9526DP02	Station 2	6/29	ND	--	ND	--
9526EP01	Station 1	6/30	ND	--	ND	--
9526EP02	Station 2	6/30	ND	--	ND	--
--	--	7/3	PUF samples for this period were not selected for analysis.			
--	--	7/4	No sampling. Holiday.			
--	--	7/5	PUF samples for this period were not selected for analysis.			
9527DP01	Station 1	7/6	ND	--	ND	--
9527DP03	Station 3	7/6	ND	--	ND	--
--	--	7/7	No sampling. Scheduled day off for contractor.			
9528AP01	Station 1	7/10	ND	--	ND	--
9528AP04	Station 4	7/10	ND	--	ND	--
--	--	7/11	PUF samples for this period were not selected for analysis.			

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9528CP01	Station 1	7/12	445	5.9	75	ND	--	ND	--	ND	--
9528CP04	Station 4	7/12	455	6.2	80	ND	--	ND	--	ND	--
--	--	7/13	PUF samples for this period were not selected for analysis.								
9528EP01	Station 1	7/14	430	5.7	69	ND	--	ND	--	ND	--
9528EP03	Station 3	7/14	436	7.4	91	ND	--	ND	--	ND	--
9529AP01	Station 1	7/17	405	5.7	66	ND	--	ND	--	ND	--
9529AP04	Station 4	7/17	367	6.5	67	ND	--	ND	--	ND	--
--	--	7/18	PUF samples for this period were not selected for analysis.								
--	--	7/19	PUF samples for this period were not selected for analysis.								
9529DP01	Station 1	7/20	460	6.1	79	ND	--	ND	--	ND	--
9529DP02	Station 2	7/20	420	6.0	72	ND	--	ND	--	ND	--
--	--	7/21	No sampling. Scheduled day off for contractor.								
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
--	--	8/1	PUF samples for this period were not selected for analysis.								
--	--	8/2	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9528CP01	Station 1	7/12	ND	--	ND	--	ND	--	ND	--
9528CP04	Station 4	7/12	ND	--	ND	--	ND	--	ND	--
--	--	7/13	PUF samples for this period were not selected for analysis.							
9528EP01	Station 1	7/14	ND	--	ND	--	ND	--	ND	--
9528EP03	Station 3	7/14	ND	--	ND	--	ND	--	ND	--
9529AP01	Station 1	7/17	ND	--	ND	--	ND	--	ND	--
9529AP04	Station 4	7/17	ND	--	ND	--	ND	--	ND	--
--	--	7/18	PUF samples for this period were not selected for analysis.							
--	--	7/19	PUF samples for this period were not selected for analysis.							
9529DP01	Station 1	7/20	ND	--	ND	--	ND	--	ND	--
9529DP02	Station 2	7/20	ND	--	ND	--	ND	--	ND	--
--	--	7/21	No sampling. Scheduled day off for contractor.							
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
--	--	8/1	No sampling. Scheduled day off for contractor.							
--	--	8/2								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9528CP01	Station 1	7/12	20.0	0.267	4.0	0.053	ND	--	ND	--
9528CP04	Station 4	7/12	18.0	0.224	4.1	0.051	ND	--	ND	--
--	--	7/13	PUF samples for this period were not selected for analysis.							
9528EP01	Station 1	7/14	48.0	0.692	28.0	0.404	ND	--	ND	--
9528EP03	Station 3	7/14	40.0	0.438	20.0	0.219	ND	--	ND	--
9529AP01	Station 1	7/17	ND	--	ND	--	ND	--	ND	--
9529AP04	Station 4	7/17	29.0	0.432	14.0	0.209	ND	--	ND	--
--	--	7/18	PUF samples for this period were not selected for analysis.							
--	--	7/19	PUF samples for this period were not selected for analysis.							
9529DP01	Station 1	7/20	8.3	0.105	3.9	0.049	ND	--	ND	--
9529DP02	Station 2	7/20	8.8	0.123	3.5	0.049	ND	--	ND	--
--	--	7/21	No sampling. Scheduled day off for contractor.							
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	1.2	--	ND	--	ND	--	ND	--
--	--	8/1	No sampling. Scheduled day off for contractor.							
--	--	8/2								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/

Sample Number	Location	Sampling End Date	Noncarcinogenic PAHs /b/									
			Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9528CP0	Station 1	7/12	ND	--	ND	--	ND	--	ND	--	ND	--
9528CP0	Station 4	7/12	ND	--	ND	--	1.8	0.022	ND	--	ND	--
--	--	7/13	PUF samples for this period were not selected for analysis.									
9528EP0	Station 1	7/14	5.3	0.076	6.1	0.088	14.0	0.202	0.9	0.014	2.7	0.039
9528EP0	Station 3	7/14	3.8	0.042	4.2	0.046	8.9	0.097	ND	--	1.6	0.018
9529AP0	Station 1	7/17	ND	--	ND	--	ND	--	ND	--	ND	--
9529AP0	Station 4	7/17	ND	--	ND	--	1.3	0.019	ND	--	ND	--
--	--	7/18	PUF samples for this period were not selected for analysis.									
--	--	7/19	PUF samples for this period were not selected for analysis.									
9529DP0	Station 1	7/20	ND	--	ND	--	ND	--	ND	--	ND	--
9529DP0	Station 2	7/20	1.8	0.025	1.6	0.022	4.4	0.061	ND	--	ND	--
--	--	7/21	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	8/1	No sampling. Scheduled day off for contractor.									
--	--	8/2										

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9528CP01	Station 1	7/12	ND	--	ND	--
9528CP04	Station 4	7/12	ND	--	ND	--
--	--	7/13	PUF samples for this period were not selected for analysis.			
9528EP01	Station 1	7/14	1.1	0.016	ND	--
9528EP03	Station 3	7/14	ND	--	ND	--
9529AP01	Station 1	7/17	ND	--	ND	--
9529AP04	Station 4	7/17	ND	--	ND	--
--	--	7/18	PUF samples for this period were not selected for analysis.			
--	--	7/19	PUF samples for this period were not selected for analysis.			
9529DP01	Station 1	7/20	ND	--	ND	--
9529DP02	Station 2	7/20	ND	--	ND	--
--	--	7/21	No sampling. Scheduled day off for contractor.			
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
--	--	8/1	No sampling. Scheduled day off for contractor.			
--	--	8/2				

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9531DP01	Station 1	8/3	457	7.0	91	ND	--	ND	--	ND	--
9531DP04	Station 4	8/3	459	7.4	96	ND	--	ND	--	ND	--
--	--	8/4	No sampling. Scheduled day off for contractor.								
--	--	8/7	PUF samples for this period were not selected for analysis.								
9532BP01	Station 1	8/8	498	7.1	100	ND	--	ND	--	ND	--
9532BP03	Station 3	8/8	485	5.0	68	ND	--	ND	--	ND	--
9532CP01	Station 1	8/9	466	7.0	93	ND	--	ND	--	ND	--
9532CP02	Station 2	8/9	467	4.2	56	ND	--	ND	--	ND	--
9532CP03	Station 3	8/9	473	6.2	83	ND	--	ND	--	ND	--
--	--	8/10	PUF samples for this period were not selected for analysis.								
9532EP01	Station 1	8/11	408	7.2	84	ND	--	ND	--	ND	--
9532EP03	Station 3	8/11	406	5.1	58	ND	--	ND	--	ND	--
9533AP01	Station 1	8/14	476	6.5	88	ND	--	ND	--	ND	--
9533AP04	Station 4	8/14	444	7.9	100	ND	--	ND	--	ND	--
--	--	8/15	PUF samples for this period were not selected for analysis.								
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
--	--	8/16	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)- fluoranthene (µg)	Airborne Benzo(k)- fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)- anthracene (µg)	Airborne Dibenz(a,h)- anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)- pyrene (µg)	Airborne Ideno(1,2,3-cd)- pyrene Concentration (µg/m³)
9531DP01	Station 1	8/3	ND	--	ND	--	ND	--	ND	--
9531DP04	Station 4	8/3	ND	--	ND	--	ND	--	ND	--
--	--	8/4	PUF samples for this period were not selected for analysis.							
--	--	8/7								
9532BP01	Station 1	8/8	ND	--	ND	--	ND	--	ND	--
9532BP03	Station 3	8/8	ND	--	ND	--	ND	--	ND	--
9532CP01	Station 1	8/9	ND	--	ND	--	ND	--	ND	--
9532CP02	Station 2	8/9	ND	--	ND	--	ND	--	ND	--
9532CP03	Station 3	8/9	ND	--	ND	--	ND	--	ND	--
--	--	8/10	PUF samples for this period were not selected for analysis.							
9532EP01	Station 1	8/11	ND	--	ND	--	ND	--	ND	--
9532EP03	Station 3	8/11	ND	--	ND	--	ND	--	ND	--
9533AP01	Station 1	8/14	ND	--	ND	--	ND	--	ND	--
9533AP04	Station 4	8/14	ND	--	ND	--	ND	--	ND	--
--	--	8/15	PUF samples for this period were not selected for analysis.							
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
--	--	8/16	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9531DP01	Station 1	8/3	9.5	0.104	3.9	0.043	ND	--	ND	--
9531DP04	Station 4	8/3	34.0	0.353	9.8	0.102	ND	--	ND	--
--	--	8/4	PUF samples for this period were not selected for analysis.							
--	--	8/7								
9532BP01	Station 1	8/8	25.0	0.250	12.0	0.120	ND	--	ND	--
9532BP03	Station 3	8/8	31.0	0.454	12.0	0.176	ND	--	ND	--
9532CP01	Station 1	8/9	27.0	0.292	14.0	0.151	ND	--	ND	--
9532CP02	Station 2	8/9	23.0	0.412	8.8	0.158	ND	--	ND	--
9532CP03	Station 3	8/9	24.0	0.291	10.0	0.121	ND	--	ND	--
--	--	8/10	PUF samples for this period were not selected for analysis.							
9532EP01	Station 1	8/11	6.3	0.075	4.8	0.057	ND	--	ND	--
9532EP03	Station 3	8/11	3.4	0.059	2.5	0.043	ND	--	ND	--
9533AP01	Station 1	8/14	23.8	0.270	11.0	0.125	ND	--	ND	--
9533AP04	Station 4	8/14	53.8	0.540	22.0	0.221	ND	--	ND	--
--	--	8/15	PUF samples for this period were not selected for analysis.							
Blank /c/	--	--	2.4	--	ND	--	ND	--	ND	--
Blank /c/	--	--	3.0	--	1.2	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	4.7	--	ND	--	ND	--	ND	--
Blank /c/	--	--	2.2	--	ND	--	ND	--	ND	--
--	--	8/16	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne
			Acenaphthene Concentration (µg)	Acenaphthene Concentration (µg/m³)	Fluorene (µg)	Fluorene Concentration (µg/m³)	Phenanthrene (µg)	Phenanthrene Concentration (µg/m³)	Anthracene (µg)	Anthracene Concentration (µg/m³)	Fluoranthene (µg)	Fluoranthene Concentration (µg/m³)
9531DP0	Station 1	8/3	ND	--	ND	--	ND	--	ND	--	ND	--
9531DP0	Station 4	8/3	10.0	0.104	8.1	0.084	19.0	0.197	3.0	0.031	4.7	0.049
--	--	8/4	PUF samples for this period were not selected for analysis.									
--	--	8/7										
9532BP0	Station 1	8/8	4.3	0.043	5.1	0.051	15.0	0.150	1.5	0.015	2.7	0.027
9532BP0	Station 3	8/8	5.6	0.082	5.9	0.086	16.0	0.234	1.6	0.023	2.8	0.041
9532CP0	Station 1	8/9	ND	--	ND	--	ND	--	ND	--	ND	--
9532CP0	Station 2	8/9	5.0	0.090	3.3	0.059	5.9	0.106	ND	--	ND	--
9532CP0	Station 3	8/9	3.2	0.039	2.7	0.033	6.4	0.077	ND	--	1.4	0.017
--	--	8/10	PUF samples for this period were not selected for analysis.									
9532EP0	Station 1	8/11	ND	--	ND	--	ND	--	ND	--	ND	--
9532EP0	Station 3	8/11	ND	--	ND	--	4.8	0.083	ND	--	1.2	0.021
9533AP0	Station 1	8/14	3.4	0.039	3.2	0.036	9.1	0.103	ND	--	1.6	0.018
9533AP0	Station 4	8/14	21.0	0.211	19.0	0.191	34.0	0.341	6.2	0.062	6.5	0.065
--	--	8/15	PUF samples for this period were not selected for analysis.									
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	8/16	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9531DP01	Station 1	8/3	ND	--	ND	--
9531DP04	Station 4	8/3	3.8	0.039	ND	--
--	--	8/4	PUF samples for this period were not selected for analysis.			
--	--	8/7				
9532BP01	Station 1	8/8	1.3	0.013	ND	--
9532BP03	Station 3	8/8	1.4	0.020	ND	--
9532CP01	Station 1	8/9	ND	--	ND	--
9532CP02	Station 2	8/9	ND	--	ND	--
9532CP03	Station 3	8/9	ND	--	ND	--
--	--	8/10	PUF samples for this period were not selected for analysis.			
9532EP01	Station 1	8/11	ND	--	ND	--
9532EP03	Station 3	8/11	ND	--	ND	--
9533AP01	Station 1	8/14	ND	--	ND	--
9533AP04	Station 4	8/14	3.4	0.034	ND	--
--	--	8/15	PUF samples for this period were not selected for analysis.			
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
--	--	8/16	PUF samples for this period were not selected for analysis.			

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9533DP01	Station 1	8/17	510	8.1	117	ND	--	ND	--	ND	--
9533DP03	Station 3	8/17	508	7.1	102	ND	--	ND	--	ND	--
--	--	8/21	PUF samples for this period were not selected for analysis.								
9534BP01	Station 1	8/22	451	7.9	101	ND	--	ND	--	ND	--
9534BP03	Station 3	8/22	431	5.3	65	ND	--	ND	--	ND	--
9534CP01	Station 1	8/23	519	9.1	134	ND	--	ND	--	ND	--
9534CP04	Station 4	8/23	525	7.1	106	ND	--	ND	--	ND	--
9534DP01	Station 1	8/24	507	9.0	129	ND	--	ND	--	ND	--
9534DP04	Station 4	8/24	500	6.8	96	ND	--	ND	--	ND	--
9534EP01	Station 1	8/25	433	8.6	105	ND	--	ND	--	ND	--
9534EP04	Station 4	8/25	440	7.7	96	ND	--	ND	--	ND	--
9535AP01	Station 1	8/28	511	7.8	112	ND	--	ND	--	ND	--
9535AP02	Station 2	8/28	507	6.6	95	ND	--	ND	--	ND	--
--	--	8/29	PUF samples for this period were not selected for analysis.								
--	--	8/30	PUF samples for this period were not selected for analysis.								
9535DP01	Station 1	8/31	385	8.6	94	ND	--	ND	--	ND	--
9535DP03	Station 3	8/31	386	5.0	54	ND	--	ND	--	ND	--
--	--	9/1	No sampling. Day off for contractor.								
--	--	9/4	No sampling. Day off for contractor.								
9536BP01	Station 1	9/5	516	6.7	98	ND	--	ND	--	ND	--
9536BP02	Station 2	9/5	516	5.7	84	ND	--	ND	--	ND	--
--	--	9/6	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)- fluoranthene (µg)	Airborne Benzo(k)- fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)- anthracene (µg)	Airborne Dibenz(a,h)- anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)- pyrene (µg)	Airborne Ideno(1,2,3-cd)- pyrene Concentration (µg/m³)
9533DP01	Station 1	8/17	ND	--	ND	--	ND	--	ND	--
9533DP03	Station 3	8/17	ND	--	ND	--	ND	--	ND	--
--	--	8/21	PUF samples for this period were not selected for analysis.							
9534BP01	Station 1	8/22	ND	--	ND	--	ND	--	ND	--
9534BP03	Station 3	8/22	ND	--	ND	--	ND	--	ND	--
9534CP01	Station 1	8/23	ND	--	ND	--	ND	--	ND	--
9534CP04	Station 4	8/23	ND	--	ND	--	ND	--	ND	--
9534DP01	Station 1	8/24	ND	--	ND	--	ND	--	ND	--
9534DP04	Station 4	8/24	ND	--	ND	--	ND	--	ND	--
9534EP01	Station 1	8/25	ND	--	ND	--	ND	--	ND	--
9534EP04	Station 4	8/25	ND	--	ND	--	ND	--	ND	--
9535AP01	Station 1	8/28	ND	--	ND	--	ND	--	ND	--
9535AP02	Station 2	8/28	ND	--	ND	--	ND	--	ND	--
--	--	8/29	PUF samples for this period were not selected for analysis.							
--	--	8/30	PUF samples for this period were not selected for analysis.							
9535DP01	Station 1	8/31	ND	--	ND	--	ND	--	ND	--
9535DP03	Station 3	8/31	ND	--	ND	--	ND	--	ND	--
--	--	9/1	No sampling. Day off for contractor.							
--	--	9/4	No sampling. Day off for contractor.							
9536BP01	Station 1	9/5	ND	--	ND	--	ND	--	ND	--
9536BP02	Station 2	9/5	ND	--	ND	--	ND	--	ND	--
--	--	9/6	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaphthylene (µg)	Airborne Acenaphthylene Concentration (µg/m³)
533DP01/c	Station 1	8/17	10.0	0.086	4.9	0.042	ND	--	ND	--
533DP03/c	Station 3	8/17	14.0	0.137	5.9	0.058	ND	--	ND	--
--	--	8/21	PUF samples for this period were not selected for analysis.							
9534BP01	Station 1	8/22	15.0	0.148	7.0	0.069	ND	--	ND	--
9534BP03	Station 3	8/22	16.0	0.247	6.5	0.100	ND	--	ND	--
9534CP01	Station 1	8/23	8.9	0.066	4.3	0.032	ND	--	ND	--
9534CP04	Station 4	8/23	36.0	0.341	18.0	0.171	ND	--	ND	--
9534DP01	Station 1	8/24	6.5	0.051	2.9	0.023	ND	--	ND	--
9534DP04	Station 4	8/24	72.0	0.749	22.0	0.229	ND	--	ND	--
9534EP01	Station 1	8/25	3.9	0.037	1.4	0.013	ND	--	ND	--
9534EP04	Station 4	8/25	9.6	0.099	3.2	0.033	ND	--	ND	--
9535AP01	Station 1	8/28	13.0	0.116	4.4	0.039	ND	--	ND	--
9535AP02	Station 2	8/28	15.0	0.157	6.5	0.068	ND	--	ND	--
--	--	8/29	PUF samples for this period were not selected for analysis.							
--	--	8/30	PUF samples for this period were not selected for analysis.							
9535DP01	Station 1	8/31	1.6	0.017	ND	--	ND	--	ND	--
9535DP03	Station 3	8/31	1.8	0.033	ND	--	ND	--	ND	--
--	--	9/1	No sampling. Day off for contractor.							
--	--	9/4	No sampling. Day off for contractor.							
536BP01/c	Station 1	9/5	19.0	0.194	9.7	0.099	ND	--	ND	--
536BP02/c	Station 2	9/5	15.0	0.179	6.8	0.081	ND	--	ND	--
--	--	9/6	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9533DP0	Station 1	8/17	ND	--	ND	--	ND	--	ND	--	ND	--
9533DP0	Station 3	8/17	1.7	0.017	1.9	0.019	7.5	0.073	ND	--	ND	--
--	--	8/21	PUF samples for this period were not selected for analysis.									
9534BP0	Station 1	8/22	ND	--	ND	--	1.8	0.018	ND	--	ND	--
9534BP0	Station 3	8/22	2.8	0.043	3.0	0.046	9.0	0.139	ND	--	2.3	0.036
9534CP0	Station 1	8/23	ND	--	ND	--	1.5	0.011	ND	--	ND	--
9534CP0	Station 4	8/23	12.0	0.114	11.0	0.104	21.0	0.199	2.4	0.023	3.1	0.029
9534DP0	Station 1	8/24	ND	--	ND	--	ND	--	ND	--	ND	--
9534DP0	Station 4	8/24	22.0	0.229	20.0	0.208	30.0	0.312	2.3	0.024	6.3	0.066
9534EP0	Station 1	8/25	ND	--	ND	--	ND	--	ND	--	ND	--
9534EP0	Station 4	8/25	3.2	0.033	3.3	0.034	8.7	0.090	ND	--	1.7	0.018
9535AP0	Station 1	8/28	ND	--	ND	--	ND	--	ND	--	ND	--
9535AP0	Station 2	8/28	2.4	0.025	2.2	0.023	6.2	0.065	ND	--	1.5	0.016
--	--	8/29	PUF samples for this period were not selected for analysis.									
--	--	8/30	PUF samples for this period were not selected for analysis.									
9535DP0	Station 1	8/31	ND	--	ND	--	1.6	0.017	ND	--	ND	--
9535DP0	Station 3	8/31	ND	--	ND	--	1.6	0.029	ND	--	ND	--
--	--	9/1	No sampling. Day off for contractor.									
--	--	9/4	No sampling. Day off for contractor.									
9536BP0	Station 1	9/5	1.7	0.017	1.9	0.019	4.9	0.050	ND	--	ND	--
9536BP0	Station 2	9/5	1.7	0.020	1.7	0.020	4.6	0.055	ND	--	ND	--
--	--	9/6	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/			
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
9533DP01	Station 1	8/17	ND	--	ND	--
9533DP03	Station 3	8/17	ND	--	ND	--
--	--	8/21	PUF samples for this period were not selected for analysis.			
9534BP01	Station 1	8/22	ND	--	ND	--
9534BP03	Station 3	8/22	ND	--	ND	--
9534CP01	Station 1	8/23	ND	--	ND	--
9534CP04	Station 4	8/23	1.5	0.014	ND	--
9534DP01	Station 1	8/24	ND	--	ND	--
9534DP04	Station 4	8/24	4.2	0.044	ND	--
9534EP01	Station 1	8/25	ND	--	ND	--
9534EP04	Station 4	8/25	ND	--	ND	--
9535AP01	Station 1	8/28	ND	--	ND	--
9535AP02	Station 2	8/28	ND	--	ND	--
--	--	8/29	PUF samples for this period were not selected for analysis.			
--	--	8/30	PUF samples for this period were not selected for analysis.			
9535DP01	Station 1	8/31	ND	--	ND	--
9535DP03	Station 3	8/31	ND	--	ND	--
--	--	9/1	No sampling. Day off for contractor.			
--	--	9/4	No sampling. Day off for contractor.			
9536BP01	Station 1	9/5	ND	--	ND	--
9536BP02	Station 2	9/5	ND	--	ND	--
--	--	9/6	PUF samples for this period were not selected for analysis.			

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
9536DP01	Station 1	9/7	458	7.1	92	ND	--	ND	--	ND	--
9536DP03	Station 3	9/7	458	5.4	70	ND	--	ND	--	ND	--
9536EP01	Station 1	9/8	435	7.8	96	ND	--	ND	--	ND	--
9536EP03	Station 3	9/8	436	5.0	62	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	ND	--	ND	--	ND	--
9537AP01	Station 1	9/11	447	6.3	80	ND	--	ND	--	ND	--
9537AP03	Station 3	9/11	445	4.6	58	ND	--	ND	--	ND	--
--	--	9/12	PUF samples for this period were not selected for analysis.								
--	--	9/13	PUF samples for this period were not selected for analysis.								
9537DP01	Station 1	9/14	465	6.8	90	ND	--	ND	--	ND	--
9537DP04	Station 4	9/14	453	6.5	83	ND	--	ND	--	ND	--
--	--	9/18	PUF samples for this period were not selected for analysis.								
9538BP01	Station 1	9/19	431	6.6	81	ND	--	ND	--	ND	--
9538BP03	Station 3	9/19	435	5.3	65	ND	--	ND	--	ND	--
9538CP01	Station 1	9/20	410	6.7	78	ND	--	ND	--	ND	--
9538CP03	Station 3	9/20	397	5.5	62	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)-anthracene (µg)	Airborne Dibenz(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9536DP01	Station 1	9/7	ND	--	ND	--	ND	--	ND	--
9536DP03	Station 3	9/7	ND	--	ND	--	ND	--	ND	--
9536EP01	Station 1	9/8	ND	--	ND	--	ND	--	ND	--
9536EP03	Station 3	9/8	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
9537AP01	Station 1	9/11	ND	--	ND	--	ND	--	ND	--
9537AP03	Station 3	9/11	ND	--	ND	--	ND	--	ND	--
--	--	9/12	PUF samples for this period were not selected for analysis.							
--	--	9/13	PUF samples for this period were not selected for analysis.							
9537DP01	Station 1	9/14	ND	--	ND	--	ND	--	ND	--
9537DP04	Station 4	9/14	ND	--	ND	--	ND	--	ND	--
--	--	9/18	PUF samples for this period were not selected for analysis.							
9538BP01	Station 1	9/19	ND	--	ND	--	ND	--	ND	--
9538BP03	Station 3	9/19	ND	--	ND	--	ND	--	ND	--
9538CP01	Station 1	9/20	ND	--	ND	--	ND	--	ND	--
9538CP03	Station 3	9/20	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9536DP01	Station 1	9/7	24.0	0.262	11.0	0.120	ND	--	ND	--
9536DP03	Station 3	9/7	10.0	0.143	6.5	0.093	ND	--	ND	--
9536EP01	Station 1	9/8	13.0	0.135	5.8	0.060	ND	--	ND	--
9536EP03	Station 3	9/8	56.0	0.904	5.9	0.095	ND	--	ND	--
Blank /d/	--	--	27.0	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	39.0	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--
9537AP01	Station 1	9/11	14.0	0.176	6.7	0.084	ND	--	ND	--
9537AP03	Station 3	9/11	12.0	0.207	3.9	0.067	ND	--	ND	--
--	--	9/12	PUF samples for this period were not selected for analysis.							
--	--	9/13	PUF samples for this period were not selected for analysis.							
9537DP01	Station 1	9/14	5.4	0.060	2.2	0.024	ND	--	ND	--
9537DP04	Station 4	9/14	32.0	0.366	2.0	0.024	ND	--	ND	--
--	--	9/18	PUF samples for this period were not selected for analysis.							
9538BP01	Station 1	9/19	38.0	0.469	15.0	0.185	ND	--	ND	--
9538BP03	Station 3	9/19	30.0	0.460	12.0	0.184	ND	--	ND	--
9538CP01	Station 1	9/20	15.0	0.192	6.3	0.081	ND	--	ND	--
9538CP03	Station 3	9/20	57.0	0.915	8.0	0.128	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9536DP0	Station 1	9/7	2.3	0.025	2.5	0.027	7.5	0.082	ND	--	ND	--
9536DP0	Station 3	9/7	2.2	0.031	2.4	0.034	9.6	0.137	ND	--	ND	--
9536EP0	Station 1	9/8	ND	--	ND	--	1.1	0.011	ND	--	ND	--
9536EP0	Station 3	9/8	1.1	0.018	1.4	0.023	5.4	0.087	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
9537AP0	Station 1	9/11	ND	--	ND	--	ND	--	ND	--	ND	--
9537AP0	Station 3	9/11	ND	--	ND	--	3.7	0.064	ND	--	ND	--
--	--	9/12	PUF samples for this period were not selected for analysis.									
--	--	9/13	PUF samples for this period were not selected for analysis.									
9537DP0	Station 1	9/14	ND	--	ND	--	ND	--	ND	--	ND	--
9537DP0	Station 4	9/14	ND	--	ND	--	2.8	0.034	ND	--	ND	--
--	--	9/18	PUF samples for this period were not selected for analysis.									
9538BP0	Station 1	9/19	2.9	0.036	3.6	0.044	11	0.136	ND	--	ND	--
9538BP0	Station 3	9/19	2.1	0.032	2.5	0.038	7.8	0.120	ND	--	ND	--
9538CP0	Station 1	9/20	ND	--	ND	--	ND	--	ND	--	ND	--
9538CP0	Station 3	9/20	ND	--	ND	--	3.0	0.048	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/			
Sample Number	Location	Sampling End Date	Total Pyrene (µg)	Airborne Pyrene Concentration (µg/m³)	Total Benzo(g,h,i) perylene (µg)	Airborne Benzo(g,h,i)-perylene Concentration (µg/m³)
9536DP01	Station 1	9/7	ND	--	ND	--
9536DP03	Station 3	9/7	ND	--	ND	--
9536EP01	Station 1	9/8	ND	--	ND	--
9536EP03	Station 3	9/8	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--
9537AP01	Station 1	9/11	ND	--	ND	--
9537AP03	Station 3	9/11	ND	--	ND	--
--	--	9/12	PUF samples for this period were not selected for analysis.			
--	--	9/13	PUF samples for this period were not selected for analysis.			
9537DP01	Station 1	9/14	ND	--	ND	--
9537DP04	Station 4	9/14	ND	--	ND	--
--	--	9/18	PUF samples for this period were not selected for analysis.			
9538BP01	Station 1	9/19	ND	--	ND	--
9538BP03	Station 3	9/19	ND	--	ND	--
9538CP01	Station 1	9/20	ND	--	ND	--
9538CP03	Station 3	9/20	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (μg)	Airborne Benzo(a)-pyrene Concentration (μg/m ³)	Total Benzo(a)-anthracene (μg)	Airborne Benzo(a)-anthracene Concentration (μg/m ³)	Total Benzo(b)-fluoranthene (μg)	Airborne Benzo(b)-fluoranthene Concentration (μg/m ³)
--	--	9/21	PUF samples for this period were not selected for analysis.								
--	--	9/22	PUF samples for this period were not selected for analysis.								
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
9539AP01	Station 1	9/25	445	5.5	69	ND	--	ND	--	ND	--
9539AP04	Station 4	9/25	451	7.5	96	ND	--	ND	--	ND	--
9539BP01	Station 1	9/26	453	6.2	80	ND	--	ND	--	ND	--
9539BP04	Station 4	9/26	--	--	--	--	--	--	--	--	--
--	--	9/27	PUF samples for this period were not selected for analysis.								
9539DP01	Station 1	9/28	427	5.7	69	ND	--	ND	--	ND	--
9539DP04	Station 4	9/28	417	6.9	81	ND	--	ND	--	ND	--
--	--	9/29	No sampling. Scheduled day off for contractor.								
--	--	10/2	PUF samples for this period were not selected for analysis.								
9540BP01	Station 1	10/3	505	5.6	79	ND	--	ND	--	ND	--
9540BP04	Station 4	10/3	530	6.8	102	ND	--	ND	--	ND	--
9540CP01	Station 1	10/4	422	6.0	72	ND	--	ND	--	ND	--
9540CP03	Station 3	10/4	407	4.0	46	ND	--	ND	--	ND	--
--	--	10/5	PUF samples for this period were not selected for analysis.								

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene	Airborne Benzo(k)-fluoranthene Concentration	Total Chrysene	Airborne Chrysene Concentration	Total Dibenz(a,h)-anthracene	Airborne Dibenz(a,h)-anthracene Concentration	Total Ideno(1,2,3-cd)-pyrene	Airborne Ideno(1,2,3-cd)-pyrene Concentration
			(µg)	(µg/m³)	(µg)	(µg/m³)	(µg)	(µg/m³)	(µg)	(µg/m³)
--	--	9/21	PUF samples for this period were not selected for analysis.							
--	--	9/22	PUF samples for this period were not selected for analysis.							
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
9539AP01	Station 1	9/25	ND	--	ND	--	ND	--	ND	--
9539AP04	Station 4	9/25	ND	--	ND	--	ND	--	ND	--
9539BP01	Station 1	9/26	ND	--	ND	--	ND	--	ND	--
9539BP04	Station 4	9/26	--	--	--	--	--	--	--	--
--	--	9/27	PUF samples for this period were not selected for analysis.							
9539DP01	Station 1	9/28	ND	--	ND	--	ND	--	ND	--
9539DP04	Station 4	9/28	ND	--	ND	--	ND	--	ND	--
--	--	9/29	No sampling. Scheduled day off for contractor.							
--	--	10/2	PUF samples for this period were not selected for analysis.							
9540BP01	Station 1	10/3	ND	--	ND	--	ND	--	ND	--
9540BP04	Station 4	10/3	ND	--	ND	--	ND	--	ND	--
9540CP01	Station 1	10/4	ND	--	ND	--	ND	--	ND	--
9540CP03	Station 3	10/4	ND	--	ND	--	ND	--	ND	--
--	--	10/5	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
--	--	9/21	PUF samples for this period were not selected for analysis.							
--	--	9/22	PUF samples for this period were not selected for analysis.							
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
9539AP01	Station 1	9/25	14.0	0.202	3.3	0.048	ND	--	ND	--
9539AP04	Station 4	9/25	20.0	0.208	4.8	0.050	ND	--	ND	--
9539BP01	Station 1	9/26	24.0	0.301	4.9	0.061	ND	--	ND	--
9539BP04	Station 4	9/26	--	--	--	--	--	--	--	--
--	--	9/27	PUF samples for this period were not selected for analysis.							
9539DP01	Station 1	9/28	ND	--	ND	--	ND	--	ND	--
9539DP04	Station 4	9/28	ND	--	ND	--	ND	--	ND	--
--	--	9/29	No sampling. Scheduled day off for contractor.							
--	--	10/2	PUF samples for this period were not selected for analysis.							
9540BP01	Station 1	10/3	ND	--	11.0	0.139	ND	--	ND	--
9540BP04	Station 4	10/3	ND	--	10.0	0.098	ND	--	ND	--
9540CP01	Station 1	10/4	4.7	0.065	3.3	0.046	ND	--	ND	--
9540CP03	Station 3	10/4	5.1	0.110	5.7	0.123	ND	--	ND	--
--	--	10/5	PUF samples for this period were not selected for analysis.							

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne
			Acenaphthene Concentration (µg)	Acenaphthene Concentration (µg/m³)	Fluorene (µg)	Fluorene Concentration (µg/m³)	Phenanthrene (µg)	Phenanthrene Concentration (µg/m³)	Anthracene (µg)	Anthracene Concentration (µg/m³)	Fluoranthene (µg)	Fluoranthene Concentration (µg/m³)
--	--	9/21	PUF samples for this period were not selected for analysis.									
--	--	9/22	PUF samples for this period were not selected for analysis.									
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
9539AP0	Station 1	9/25	ND	--	ND	--	ND	--	ND	--	ND	--
9539AP0	Station 4	9/25	2.3	0.024	2.5	0.026	7.8	0.081	ND	--	1.4	0.015
9539BP0	Station 1	9/26	1.2	0.015	1.0	0.013	2.9	0.036	ND	--	ND	--
9539BP0	Station 4	9/26	--	--	--	--	--	--	--	--	--	--
--	--	9/27	PUF samples for this period were not selected for analysis.									
9539DP0	Station 1	9/28	ND	--	ND	--	ND	--	ND	--	ND	--
9539DP0	Station 4	9/28	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	9/29	No sampling. Scheduled day off for contractor.									
--	--	10/2	PUF samples for this period were not selected for analysis.									
9540BP0	Station 1	10/3	ND	--	ND	--	2.4	0.030	ND	--	ND	--
9540BP0	Station 4	10/3	ND	--	3.5	0.034	10.0	0.098	ND	--	ND	--
9540CP0	Station 1	10/4	ND	--	ND	--	1.9	0.026	ND	--	ND	--
9540CP0	Station 3	10/4	1.2	0.026	1.5	0.032	5.2	0.112	5.4	0.116	ND	--
--	--	10/5	PUF samples for this period were not selected for analysis.									

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (μg)	Airborne Pyrene Concentration ($\mu\text{g}/\text{m}^3$)	Total Benzo(g,h,i) perylene (μg)	Airborne Benzo(g,h,i)- perylene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	9/21	PUF samples for this period were not selected for analysis.			
--	--	9/22	PUF samples for this period were not selected for analysis.			
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
9539AP01	Station 1	9/25	ND	--	ND	--
9539AP04	Station 4	9/25	ND	--	ND	--
9539BP01	Station 1	9/26	ND	--	ND	--
9539BP04	Station 4	9/26	--	--	--	--
--	--	9/27	PUF samples for this period were not selected for analysis.			
9539DP01	Station 1	9/28	ND	--	ND	--
9539DP04	Station 4	9/28	ND	--	ND	--
--	--	9/29	No sampling. Scheduled day off for contractor.			
--	--	10/2	PUF samples for this period were not selected for analysis.			
9540BP01	Station 1	10/3	ND	--	ND	--
9540BP04	Station 4	10/3	ND	--	ND	--
9540CP01	Station 1	10/4	ND	--	ND	--
9540CP03	Station 3	10/4	ND	--	ND	--
--	--	10/5	PUF samples for this period were not selected for analysis.			

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m ³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m ³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m ³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m ³)
9540EP01	Station 1	10/6	302	5.9	51	ND	--	ND	--	ND	--
9540EP03	Station 3	10/6	309	3.8	34	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
9541BP01	Station 1	10/10	435	6.2	76	ND	--	ND	--	ND	--
9541BP04	Station 4	10/10	430	5.0	61	ND	--	ND	--	ND	--
--	--	10/11	PUF samples for this period were not selected for analysis.								
9541DP01	Station 1	10/12	465	6.1	81	ND	--	ND	--	ND	--
9541DP03	Station 3	10/12	462	4.5	59	ND	--	ND	--	ND	--
--	--	10/13	No sampling. Scheduled day off for contractor.								
--	--	10/16	PUF samples for this period were not selected for analysis.								
9542BP01	Station 1	10/17	435	6.1	75	ND	--	ND	--	ND	--
9542BP03	Station 3	10/17	422	4.5	53	ND	--	ND	--	ND	--
--	--	10/18	PUF samples for this period were not selected for analysis.								
9542DP01	Station 1	10/19	338	6.5	62	ND	--	ND	--	ND	--
9542DP04	Station 4	10/19	340	8.3	80	ND	--	ND	--	ND	--
9542EP01	Station 1	10/20	326	6.3	58	ND	--	ND	--	ND	--
9542EP04	Station 4	10/20	329	7.7	72	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)-fluoranthene (µg)	Airborne Benzo(k)-fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenzo(a,h)-anthracene (µg)	Airborne Dibenzo(a,h)-anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)-pyrene (µg)	Airborne Ideno(1,2,3-cd)-pyrene Concentration (µg/m³)
9540EP01	Station 1	10/6	ND	--	ND	--	ND	--	ND	--
9540EP03	Station 3	10/6	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
9541BP01	Station 1	10/10	ND	--	ND	--	ND	--	ND	--
9541BP04	Station 4	10/10	ND	--	ND	--	ND	--	ND	--
--	--	10/11	PUF samples for this period were not selected for analysis.							
9541DP01	Station 1	10/12	ND	--	ND	--	ND	--	ND	--
9541DP03	Station 3	10/12	ND	--	ND	--	ND	--	ND	--
--	--	10/13	No sampling. Scheduled day off for contractor.							
--	--	10/16	PUF samples for this period were not selected for analysis.							
9542BP01	Station 1	10/17	ND	--	ND	--	ND	--	ND	--
9542BP03	Station 3	10/17	ND	--	ND	--	ND	--	ND	--
--	--	10/18	PUF samples for this period were not selected for analysis.							
9542DP01	Station 1	10/19	ND	--	ND	--	ND	--	ND	--
9542DP04	Station 4	10/19	ND	--	ND	--	ND	--	ND	--
9542EP01	Station 1	10/20	ND	--	ND	--	ND	--	ND	--
9542EP04	Station 4	10/20	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (µg)	Airborne Naphthalene Concentration (µg/m³)	Total 2-Methyl-naphthalene (µg)	Airborne 2-Methyl-naphthalene Concentration (µg/m³)	Total 2-Chloro-naphthalene (µg)	Airborne 2-Chloro-naphthalene Concentration (µg/m³)	Total Acenaph-thylene (µg)	Airborne Acenaph-thylene Concentration (µg/m³)
9540EP01	Station 1	10/6	31.1	0.612	14.0	0.276	ND	--	ND	--
9540EP03	Station 3	10/6	42.1	1.256	10.0	0.298	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	4.9	--	ND	--	ND	--	ND	--
Blank /c/	--	--	4.9	--	ND	--	ND	--	ND	--
9541BP01	Station 1	10/10	22.0	0.288	8.9	0.116	ND	--	ND	--
9541BP04	Station 4	10/10	18.0	0.294	4.3	0.070	ND	--	ND	--
--	--	10/11	PUF samples for this period were not selected for analysis.							
9541DP01	Station 1	10/12	8.1	0.100	3.0	0.037	ND	--	ND	--
9541DP03	Station 3	10/12	6.3	0.107	2.3	0.039	ND	--	ND	--
--	--	10/13	No sampling. Scheduled day off for contractor.							
--	--	10/16	PUF samples for this period were not selected for analysis.							
9542BP01	Station 1	10/17	13.0	0.174	5.1	0.068	ND	--	ND	--
9542BP03	Station 3	10/17	7.5	0.141	2.7	0.051	ND	--	ND	--
--	--	10/18	PUF samples for this period were not selected for analysis.							
9542DP01	Station 1	10/19	18.0	0.290	6.5	0.105	ND	--	ND	--
9542DP04	Station 4	10/19	21.0	0.263	7.9	0.099	ND	--	ND	--
9542EP01	Station 1	10/20	7.4	0.127	2.8	0.048	ND	--	ND	--
9542EP04	Station 4	10/20	8.3	0.116	2.2	0.031	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/

Sample Number	Location	Sampling End Date	Noncarcinogenic PAHs /b/									
			Total Acenaphthene (µg)	Airborne Acenaphthene Concentration (µg/m³)	Total Fluorene (µg)	Airborne Fluorene Concentration (µg/m³)	Total Phenanthrene (µg)	Airborne Phenanthrene Concentration (µg/m³)	Total Anthracene (µg)	Airborne Anthracene Concentration (µg/m³)	Total Fluoranthene (µg)	Airborne Fluoranthene Concentration (µg/m³)
9540EP0	Station 1	10/6	ND	--	1.1	0.022	2.9	0.057	ND	--	ND	--
9540EP0	Station 3	10/6	ND	--	ND	--	2.2	0.066	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
9541BP0	Station 1	10/10	1.6	0.021	2.0	0.026	6.1	0.080	ND	--	ND	--
9541BP0	Station 4	10/10	ND	--	ND	--	2.5	0.041	ND	--	ND	--
--	--	10/11	PUF samples for this period were not selected for analysis.									
9541DP0	Station 1	10/12	ND	--	ND	--	ND	--	ND	--	ND	--
9541DP0	Station 3	10/12	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	10/13	No sampling. Scheduled day off for contractor.									
--	--	10/16	PUF samples for this period were not selected for analysis.									
9542BP0	Station 1	10/17	ND	--	ND	--	ND	--	ND	--	ND	--
9542BP0	Station 3	10/17	ND	--	ND	--	ND	--	ND	--	ND	--
--	--	10/18	PUF samples for this period were not selected for analysis.									
9542DP0	Station 1	10/19	ND	--	ND	--	ND	--	ND	--	ND	--
9542DP0	Station 4	10/19	1.1	0.014	1.1	0.014	3.2	0.040	ND	--	ND	--
9542EP0	Station 1	10/20	ND	--	ND	--	ND	--	ND	--	ND	--
9542EP0	Station 4	10/20	ND	--	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (µg)	Airborne Pyrene Concentration (µg/m³)	Total Benzo(g,h,i) perylene (µg)	Airborne Benzo(g,h,i)- perylene Concentration (µg/m³)
9540EP01	Station 1	10/6	ND	--	ND	--
9540EP03	Station 3	10/6	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
9541BP01	Station 1	10/10	ND	--	ND	--
9541BP04	Station 4	10/10	ND	--	ND	--
--	--	10/11	PUF samples for this period were not selected for analysis.			
9541DP01	Station 1	10/12	ND	--	ND	--
9541DP03	Station 3	10/12	ND	--	ND	--
--	--	10/13	No sampling. Scheduled day off for contractor.			
--	--	10/16	PUF samples for this period were not selected for analysis.			
9542BP01	Station 1	10/17	ND	--	ND	--
9542BP03	Station 3	10/17	ND	--	ND	--
--	--	10/18	PUF samples for this period were not selected for analysis.			
9542DP01	Station 1	10/19	ND	--	ND	--
9542DP04	Station 4	10/19	ND	--	ND	--
9542EP01	Station 1	10/20	ND	--	ND	--
9542EP04	Station 4	10/20	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

						Carcinogenic PAHs /a/					
Sample Number	Location	Sampling Period	Sample Run Time (minutes)	Average Sampler Flow (CFM)	Total Air Volume thru PUF (m³)	Total Benzo(a)-pyrene (µg)	Airborne Benzo(a)-pyrene Concentration (µg/m³)	Total Benzo(a)-anthracene (µg)	Airborne Benzo(a)-anthracene Concentration (µg/m³)	Total Benzo(b)-fluoranthene (µg)	Airborne Benzo(b)-fluoranthene Concentration (µg/m³)
--	--	10/23	PUF samples for this period were not selected for analysis.								
9543BP01	Station 1	10/24	458	6.2	80	ND	--	ND	--	ND	--
9543BP03	Station 3	10/24	457	5.5	71	ND	--	ND	--	ND	--
--	--	10/25	PUF samples for this period were not selected for analysis.								
9543DP01	Station 1	10/26	254	6.9	50	ND	--	ND	--	ND	--
9543DP02	Station 2	10/26	255	8.4	61	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--
Blank /c/	--	--	--	--	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Carcinogenic PAHs /a/							
Sample Number	Location	Sampling End Date	Total Benzo(k)- fluoranthene (µg)	Airborne Benzo(k)- fluoranthene Concentration (µg/m³)	Total Chrysene (µg)	Airborne Chrysene Concentration (µg/m³)	Total Dibenz(a,h)- anthracene (µg)	Airborne Dibenz(a,h)- anthracene Concentration (µg/m³)	Total Ideno(1,2,3-cd)- pyrene (µg)	Airborne Ideno(1,2,3-cd)- pyrene Concentration (µg/m³)
--	--	10/23	PUF samples for this period were not selected for analysis.							
9543BP01	Station 1	10/24	ND	--	ND	--	ND	--	ND	--
9543BP03	Station 3	10/24	ND	--	ND	--	ND	--	ND	--
--	--	10/25	PUF samples for this period were not selected for analysis.							
9543DP01	Station 1	10/26	ND	--	ND	--	ND	--	ND	--
9543DP02	Station 2	10/26	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Noncarcinogenic PAHs /b/							
Sample Number	Location	Sampling End Date	Total Naphthalene (μg)	Airborne Naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total 2-Methyl- naphthalene (μg)	Airborne 2-Methyl- naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total 2-Chloro- naphthalene (μg)	Airborne 2-Chloro- naphthalene Concentration ($\mu\text{g}/\text{m}^3$)	Total Acenaph- thylene (μg)	Airborne Acenaph- thylene Concentration ($\mu\text{g}/\text{m}^3$)
--	--	10/23	PUF samples for this period were not selected for analysis.							
9543BP01	Station 1	10/24	28.0	0.350	12.0	0.150	ND	--	ND	--
9543BP03	Station 3	10/24	19.0	0.268	7.1	0.100	ND	--	ND	--
--	--	10/25	PUF samples for this period were not selected for analysis.							
9543DP01	Station 1	10/26	15.0	0.300	6.0	0.120	ND	--	ND	--
9543DP02	Station 2	10/26	9.3	0.152	3.2	0.052	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/												
Sample Number	Location	Sampling End Date	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne	Total	Airborne
			Acenaphthene Concentration (µg)	Acenaphthene Concentration (µg/m³)	Fluorene (µg)	Fluorene Concentration (µg/m³)	Phenanthrene (µg)	Phenanthrene Concentration (µg/m³)	Anthracene (µg)	Anthracene Concentration (µg/m³)	Fluoranthene (µg)	Fluoranthene Concentration (µg/m³)
--	--	10/23	PUF samples for this period were not selected for analysis.									
9543BP0	Station 1	10/24	ND	--	1.0	0.013	2.2	0.028	ND	--	ND	--
9543BP0	Station 3	10/24	ND	--	ND	--	1.7	0.024	ND	--	ND	--
--	--	10/25	PUF samples for this period were not selected for analysis.									
9543DP0	Station 1	10/26	ND	--	ND	--	ND	--	ND	--	ND	--
9543DP0	Station 2	10/26	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--

**Table 5. Ambient Air Monitoring Results - Polyurethane Foam/SOC Sampling
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Noncarcinogenic PAHs /b/						
Sample Number	Location	Sampling End Date	Total Pyrene (µg)	Airborne Pyrene Concentration (µg/m³)	Total Benzo(g,h,i) perylene (µg)	Airborne Benzo(g,h,i)- perylene Concentration (µg/m³)
--	--	10/23	PUF samples for this period were not selected for analysis.			
9543BP01	Station 1	10/24	ND	--	ND	--
9543BP03	Station 3	10/24	ND	--	ND	--
--	--	10/25	PUF samples for this period were not selected for analysis.			
9543DP01	Station 1	10/26	ND	--	ND	--
9543DP02	Station 2	10/26	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--
Blank /c/	--	--	ND	--	ND	--

PAHs No applicable value for this cell.

PUF Polynuclear aromatic hydrocarbons.

CFM Polyurethane foam.

ND Cubic feet per minute.

Not detected. Detection limit for all compounds is 1.0 micrograms per sample.

/a/ Carcinogenic PAHs: Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene.

/b/ Non-Carcinogenic PAHs: Naphthalene, 2-Methylnaphthalene, 2-Chloronaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(g,h,i)perylene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, Fluoranthene, Pyrene, Benzo(g,h,i)perylene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene.

/c/ Only total mass of SOC's reported because blank samples are laboratory blanks.

Table 6. Storm Water Storage Capacity Requirements
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

DESCRIPTION OF AREA	AREA Square Feet	VOLUME OF WATER FROM 25-YEAR, 24-HOUR STORM ^a		VOLUME STORED ON GROUND ^b		ADDITIONAL STORAGE VOLUME REQUIRED	
		Cubic Feet	Gallons	Cubic Feet	Gallons	Cubic Feet	Gallons
North Portion of Exclusion Zone	53,536	15,200	113,700	10,530	78,800	4,700	35,200
South Portion of Exclusion Zone	53,224 ^c	15,100	112,900	3,240	24,200	11,900	89,000
					TOTAL		124,200 ^d

Notes:

^a Basis is a 25-Year, 24-Hour Storm of 3.4 inches of rain.

^b Areal and volume data derived from survey of the Exclusion Zone. See Plate 6.

^c South Area = (Area B) + (Strip Along Eastern Edge of Area B)
= 47,544 + 5,700 (graphically estimated) = 53,244
= 53,244 Square Feet

^d Based on two of the three 20,000-gallon tanks located in the bermed area of the Support Zone being available, 40,000 gallons of storage capacity is available. Therefore, the net additional storage volume needed is:

$$124,000 - 40,000 = 84,000 \text{ gallons.}$$

84,000 gallons may be accommodated in five 20,000-gallon storage tanks.

**Table 7. Analytical Data Summary for Water Generated During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Source:	Discharge Permit #1 60,000 gallons collected rainwater	Discharge Permit #2 60,000 gallons collected rainwater	Discharge Permit #3 100,000 gallons collected rainwater	Discharge Permit #4 40,000 gallons collected rainwater	Discharge Permit #5 20,000 gallons of rainwater collected in containment vault	Containment vault, Pickling Tanks, Rectangular AAST, and Steel Racks Rinse Water (1,000 gallons) Not Sampled*
Sample Date:	1/18/95 + 1/13/95	3/7/95	3/15/95 + 3/16/95	5/18/95	1/18/96	
Report Date:	1/31/95 + 1/20/95	3/21/95	4/2/95 + 3/22/95	5/23/95	1/29/96	NA
Discharge Date:	2/9/95	3/22/95	4/13/95	6/5/95	2/15/96	12/21/96
Chit No.:	1140 + Quan.	1315	1365, 1365A + Quan.	1570	2156	NA

Analytes and Methods	Units	Limits*						Not sampled
pH	pH units	>6 and <9.5	7.6	8.3	7.7	8.2	7.9	
Chemical Oxygen Demand	mg/L	--	56	50	24	47		
Cyanide - Total	mg/L	1	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	
Flash Point	Celsius	≥60	>100	>100	>100	>100		
Fluoride	mg/L	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
Phenolics - Total	mg/L	23.0	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)	
Sulfide - Dissolved	mg/L	0.5	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.10)	
Total Suspended Solids	mg/L	--	8	62	7.5	14	110	

CCR Title 22 Inorganic Persistent and Bioaccumulative Toxic Substances (Metals)

Asbestos	weight %	--		0.026*	<0.1% wt*			
Chromium	mg/L	5	0.13	0.37	0.29	0.61	0.66	
Chromium (VI)	mg/L	--	0.061		0.21	0.31	0.41	
Copper	mg/L	4.0	0.06	0.093	0.036	0.049	0.070	
Fluoride Salts	mg/L	180						
Lead	mg/L	1.5	ND(0.1)	0.24	ND(0.1)	0.10	0.41	
Mercury	mg/L	0.05	ND(0.0002)	0.00013	ND(0.0001)	ND(0.0002)	ND(0.0001)	
Zinc	mg/L	7.0	0.26	0.54	0.13	0.31	1.1	
All other Title 22 metals	mg/L	--	ND	ND	ND	ND	ND	

EPA Method 624/6240 - Volatile Organics

Methylene Chloride	ug/L	--	ND	35 ⁴	ND			
All other 624/6240 Compounds	ug/L	various	ND	ND	ND			

EPA Method 625 Modified/6270 - Semivolatile Organics

All 625 Modified/6270 Compounds	ug/L	various	ND				ND	
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**Table 7. Analytical Data Summary for Water Generated During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Source:	Discharge Permit #1 60,000 gallons collected rainwater	Discharge Permit #2 60,000 gallons collected rainwater	Discharge Permit #3 100,000 gallons collected rainwater	Discharge Permit #4 40,000 gallons collected rainwater	Discharge Permit #5 20,000 gallons of rainwater collected in containment vault	Containment vault, Pickling Tanks, Rectangular AAST, and Steel Racks Rinse Water (1,000 gallons) Not Sampled*
Sample Date:	1/18/95 + 1/13/95	3/7/95	3/15/95 + 3/16/95	5/16/95	1/18/96	NA
Report Date:	1/31/95 + 1/20/95	3/21/95	4/2/95 + 3/22/95	5/23/95	1/29/96	NA
Discharge Date:	2/9/95	3/22/95	4/13/95	6/5/95	2/15/96	12/21/96
Chit No.:	1140 + Quan.	1315	1365, 1365 A + Quan.	1570	2156	NA

Analytes and Methods	Units	Limits*					Not sampled
EPA Method 8080 - Organichlorine Pesticides and Polychlorinated Biphenyls							
All 8080 Compounds	ug/L	various	ND	ND	ND	ND	
EPA Method 8120 - Chlorinated Hydrocarbons							
All 8120 Compounds	ug/L	various	ND	ND	ND	ND	
EPA Method 8150 - Chlorinated Herbicides							
All 8150 Compounds	ug/L	various	ND	ND	ND		
EPA Method 8280 - Dioxins and Furans							
OCDD	ng/L	--	0.65	ND(1.0)			
All other 8280 Compounds	ug/L	various	ND	ND			
Standard Method (SM) 5520B Modified							

* Most restrictive limit on analyte presented in City and County of San Francisco Department of Public Works batch wastewater discharge requirements (see Appendix F). "--" indicates no limit presented.

* Units are million chrysotile fibers per liter.

* Analytical report also indicated a count of 0.66 million fibers per liter for this sample.

* The laboratory report indicated the following: "624 NOTE: Because methylene chloride is a common lab contaminant, the methylene chloride found in the sample should be considered suspect. All bottles had headspace."

* See McKittrick Waste Treatment Site "Generator's Waste Profile" in Appendix F.

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

		Source:	Concrete core 0 to 3" below surface visibly contaminated block (C1A)	Concrete core 3" to 6" below surface of visibly contaminated block (C2A)	Concrete core 0 to 3" below surface of non- visibly contaminated block (D1A)	Concrete core 3" to 6" below surface of non- visibly contaminated block (D2A)	Sand blasted concrete block, surface sample CS-1	Sand blasted concrete block, surface sample CS-2	Sand blasted concrete block, surface sample CS-3	Sand blasted concrete block, core 1" to 3" below surface, sample CD-1	Sand blasted concrete block, core 1" to 3" below surface, sample CD-2
		Sample Date:	8/15/95	8/15/95	8/15/95	8/15/95	9/13/95	9/13/95	9/13/95	9/13/95	9/13/95
		Report Date:	8/21/95	8/21/95	8/21/95	8/21/95	9/20/95	9/20/95	9/20/95	9/20/95	9/20/95
		Chit No.:	1814	1814	1814	1814	1886	1886	1886	1886	1886
Analytes and Methods	Units*	Limits									
* wipe samples are in ug/wipe											
CCR Title 22 Metals - Total (TTLIC)											
Antimony	mg/Kg	500					ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Arsenic	mg/Kg	500					ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Asbestos	fibers/g	1.0									
Barium	mg/Kg	10000					180	230	100	180	250
Beryllium	mg/Kg	75					ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.56
Cadmium	mg/Kg	100					ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(.5)
Chromium	mg/Kg	2500					62	60	120	43	52
Chromium (VI)	mg/Kg	500					3.3	1.3	4.3	0.38	0.95
Cobalt	mg/Kg	8000					7.0	9.5	3.1	11	8.9
Copper	mg/Kg	2500					36	62	17	46	50
Fluoride Salts	mg/Kg	18000									
Lead	mg/Kg	1000					8.0	5.3	15	ND(5.0)	5.8
Mercury	mg/Kg	20					ND(.02)	0.031	ND(0.02)	0.042	ND(0.02)
Molybdenum	mg/Kg	3500					ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)
Nickel	mg/Kg	2000					37	53	15	50	50
Selenium	mg/Kg	100					ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Silver	mg/Kg	500					ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Thallium	mg/Kg	700					ND(5.0)	5.4	ND(5.0)	ND(5.0)	ND(5.0)
Vanadium	mg/Kg	2400					80	65	15	60	62
Zinc	mg/Kg	5000					99	91	330	61	69
EPA Methods 6010 and 7470 - TCLP Metals											
Barium	mg/L	100.0	0.22	0.23	0.16	0.25	1.3	0.50	0.24	0.50	0.70
Cadmium	mg/L	1.0	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Chromium	mg/L	5.0	18	15	12	7.8	0.36	0.46	1.4	0.15	0.33
Lead	mg/L	5.0	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Mercury	mg/L	0.2	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)
All Other 6010/7470 Compounds	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND
Unreported Methodology											
pH	pH units	>2 and <12.5					11	12	12	12	12
SM 5520E&F Modified											
Total Recoverable Petroleum HCs	mg/Kg										
EPA Methods 8015 Mod/8020 - TPH with BTEX											
Benzene	mg/Kg										
Toluene	mg/Kg										
Ethyl Benzene	mg/Kg										
Xylenes	mg/Kg										
TPH as Gasoline	mg/Kg										

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

			Source: Sand blasted concrete block, core 1" to 3" below surface, sample CD-3	Sand blasted concrete block, core 4" to 4.5" below surface, sample CC-1	Sand blasted concrete block, core 4" to 4.5" below surface, sample CC-2	Sand blasted concrete block, center of block core sample CCC-1	Water blasted steel drying racks 10 wipe samples (peak/average/standard deviation)	Water blasted steel drying racks wipe sample 1LPS	Water blasted steel drying racks wipe sample 2LPS	Dirt Pile 1 northeastern quadrant 18CY sample S-1	Dirt Pile 2 northeastern quadrant 15CY sample 1A
Sample Date:			9/13/95	9/13/95	9/13/95	9/13/95	8/29/95	9/12/95	9/12/95	1/24/95	4/10/95
Report Date:			9/20/95	9/20/95	9/20/95	9/20/95	8/30/95	9/13/95	9/13/95	2/6/95	4/26/95
Chit No.:			1886	1886	1886	1886	1860	1879	1879	1183	1496
Analytes and Methods	Units*	Limits									
* wipe samples are in ug/wipe											
CCR Title 22 Metals - Total (TTLC)											
Antimony	mg/Kg	500	ND(5.0)	ND(5.0)	ND(5.0)					80	ND(5.0)
Arsenic	mg/Kg	500	ND(5.0)	ND(5.0)	ND(5.0)					16	ND(5.0)
Asbestos	fibers/g	1.0									
Barium	mg/Kg	10000	220	230	250					210	100
Beryllium	mg/Kg	75	ND(0.5)	ND(5.0)	ND(5.0)					ND(0.5)	ND(0.5)
Cadmium	mg/Kg	100	ND(0.5)	ND(5.0)	ND(5.0)					6.4	3.3
Chromium	mg/Kg	2500	50	66	57		410/57/125	7.2	210	3700	820
Chromium (VI)	mg/Kg	500	0.37	0.60	0.51					0.79	0.69
Cobalt	mg/Kg	8000	8.6	ND(25)	ND(25)					22	9
Copper	mg/Kg	2500	51	45	47					180	220
Fluoride Salts	mg/Kg	18000									
Lead	mg/Kg	1000	5.5	ND(50)	ND(50)		65/8.6/20	12	220	1600	750
Mercury	mg/Kg	20	0.028	ND(0.02)	ND(0.02)					0.11	0.11
Molybdenum	mg/Kg	3500	ND(2.5)	ND(25)	ND(25)					6.6	3.4
Nickel	mg/Kg	2000	52	50	46					200	84
Selenium	mg/Kg	100	7.9	ND(50)	ND(50)					ND(5.0)	ND(5.0)
Silver	mg/Kg	500	ND(0.5)	ND(5.0)	ND(5.0)					ND(0.5)	ND(0.5)
Thallium	mg/Kg	700	5.5	ND(50)	ND(50)					63	ND(5.0)
Vanadium	mg/Kg	2400	58	85	89					27	14
Zinc	mg/Kg	5000	140	91	170		770/125/228	100	580	11000	2700
EPA Methods 8010 and 7470 - TCLP Metals											
Barium	mg/L	100.0	0.84	0.44	0.44	0.53					
Cadmium	mg/L	1.0	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)					
Chromium	mg/L	5.0	0.18	0.19	0.055	0.046					
Lead	mg/L	5.0	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)					
Mercury	mg/L	0.2	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)					
All Other 8010/7470 Compounds	mg/L		ND	ND	ND	ND					
Unreported Methodology											
pH	pH units	>2 and <12.5	12	11	11	12					
SM 5520EaF Modified											
Total Recoverable Petroleum HCs	mg/Kg										
EPA Methods 8015 Mod/8020 - TPH with BTEX											
Benzene	mg/Kg										
Toluene	mg/Kg										
Ethyl Benzene	mg/Kg										
Xylenes	mg/Kg										
TPH as Gasoline	mg/Kg										

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Source:			Dirt Pile 2 northeastern quadrant 15CY sample 1B	Dirt Pile 2 northeastern quadrant 15CY sample 2A	Dirt Pile 2 northeastern quadrant 15CY sample 2B	Dirt Pile 3 northeastern quadrant 45CY sample SP-1	Dirt Pile 3 northeastern quadrant 45CY sample SP-2	Dirt Pile 3 northeastern quadrant 45CY sample SP-3	Dirt Pile 3 northeastern quadrant 45CY sample SP-4	Dirt Pile 3 northeastern quadrant 45CY sample SP-5
Sample Date:			4/10/95	4/10/95	4/10/95	5/10/95	5/10/95	5/10/95	5/10/95	5/10/95
Report Date:			4/26/95	4/26/95	4/26/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Chit No.:			1496	1496	1496	1648	1648	1648	1648	1648
Analytes and Methods	Units*	Limits								
* wipe samples are in ug/wipe										
CCR Title 22 Metals - Total (TTLC)										
Antimony	mg/Kg	500	ND(5.0)	ND(5.0)	ND(5.0)					
Arsenic	mg/Kg	500	13	9.5	10					
Asbestos	fibers/g	1.0								
Barium	mg/Kg	10000	160	110	94					
Beryllium	mg/Kg	75	ND(0.5)	ND(0.5)	ND(0.5)					
Cadmium	mg/Kg	100	4.9	2.8	2.5					
Chromium	mg/Kg	2500	810	900	910					
Chromium (VI)	mg/Kg	500	1.4	1.3	1.4					
Cobalt	mg/Kg	8000	11	9.1	9.6					
Copper	mg/Kg	2500	290	120	120					
Fluoride Salts	mg/Kg	18000								
Lead	mg/Kg	1000	1000	820	660					
Mercury	mg/Kg	20	0.10	0.24	0.15					
Molybdenum	mg/Kg	3500	5.4	3.2	2.8					
Nickel	mg/Kg	2000	95	84	99					
Selenium	mg/Kg	100	ND(5.0)	ND(5.0)	ND(5.0)					
Silver	mg/Kg	500	ND(0.5)	ND(0.5)	ND(0.5)					
Thallium	mg/Kg	700	ND(5.0)	ND(5.0)	ND(5.0)					
Vanadium	mg/Kg	2400	16	14	12					
Zinc	mg/Kg	5000	3000	2600	2900					
EPA Methods 6010 and 7470 - TCLP Metals										
Barium	mg/L	100.0				1.5	0.57	0.44	0.56	0.48
Cadmium	mg/L	1.0				0.058	0.023	0.026	0.29	0.014
Chromium	mg/L	5.0				0.41	1.6	0.98	2.4	2.8
Lead	mg/L	5.0				1.2	0.17	0.37	0.30	ND(0.1)
Mercury	mg/L	0.2				ND(.0002)	ND(.0002)	ND(.0002)	0.0002	ND(.0002)
All Other 6010/7470 Compounds	mg/L					ND	ND	ND	ND	ND
Unreported Methodology										
pH	pH units	>2 and <12.5								
SM 5520EAF Modified										
Total Recoverable Petroleum HCs	mg/Kg									
EPA Methods 8015 Mod/8020 - TPH with BTEX										
Benzene	mg/Kg									
Toluene	mg/Kg									
Ethyl Benzene	mg/Kg									
Xylenes	mg/Kg									
TPH as Gasoline	mg/Kg									

**Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Source:			Dirt Pile 4 southwestern quadrant 66CY sample SP-6	Dirt Pile 4 southwestern quadrant 66CY sample SP-7	Dirt Pile 4 southwestern quadrant 66CY sample SP-8	Dirt Pile 4 southwestern quadrant 66CY sample SP-9	Dirt Pile 4 southwestern quadrant 66CY sample SP-10	Dirt Pile 4 southwestern quadrant 66CY sample SP-11	Dirt Pile 4 southwestern quadrant 66CY sample SP-12
Sample Date:			5/10/95	5/10/95	5/10/95	5/10/95	5/10/95	5/10/95	5/10/95
Report Date:			6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Chit No.:			1648	1648	1648	1648	1648	1648	1648
Analytes and Methods	Units*	Limits							
* wipe samples are in ug/wipe									
CCR Title 22 Metals - Total (TTLC)									
Antimony	mg/Kg	500							
Arsenic	mg/Kg	500							
Asbestos	fibers/g	1,0							
Barium	mg/Kg	10000							
Beryllium	mg/Kg	75							
Cadmium	mg/Kg	100							
Chromium	mg/Kg	2500							
Chromium (VI)	mg/Kg	500							
Cobalt	mg/Kg	8000							
Copper	mg/Kg	2500							
Fluoride Salts	mg/Kg	18000							
Lead	mg/Kg	1000							
Mercury	mg/Kg	20							
Molybdenum	mg/Kg	3500							
Nickel	mg/Kg	2000							
Selenium	mg/Kg	100							
Silver	mg/Kg	500							
Thallium	mg/Kg	700							
Vanadium	mg/Kg	2400							
Zinc	mg/Kg	5000							
EPA Methods 6010 and 7470 - TCLP Metals									
Barium	mg/L	100.0	0.47	0.28	0.34	0.36	0.70	0.35	0.60
Cadmium	mg/L	1.0	0.026	0.039	0.035	ND(0.1)	0.027	0.013	0.031
Chromium	mg/L	5.0	2.9	19	12	0.16	0.19	0.66	0.99
Lead	mg/L	5.0	0.70	0.25	0.26	0.78	1.5	1.1	2.2
Mercury	mg/L	0.2	ND(0.0002)	0.00021	ND(0.0002)	0.0002	ND(0.0002)	0.00028	0.00029
All Other 6010/7470 Compounds	mg/L		ND	ND	ND	ND	ND	ND	ND
Unreported Methodology									
pH	pH units	>2 and <12.5							
SM 5520EAF Modified									
Total Recoverable Petroleum HCs	mg/Kg								
EPA Methods 8015 Mod/8020 - TPH with STEX									
Benzene	mg/Kg								
Toluene	mg/Kg								
Ethyl Benzene	mg/Kg								
Xylenes	mg/Kg								
TPH as Gasoline	mg/Kg								

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Source:			Dirt Pile 4 southwestern quadrant 66CY sample SP-13	Dirt Pile 5 northeastern quadrant 10CY sample 1-M & 1-HC	Dirt Pile 6 southwestern quadrant 50CY sample A1	Dirt Pile 6 southwestern quadrant 50CY sample A2	Dirt bin removed 2/8/96, 20CY Peak value out of 3	Vegetation Pile northeastern quadrant sample A1	Vegetation Pile northeastern quadrant sample A2	Vegetation Pile northeastern quadrant sample A3
Sample Date:			5/10/95	7/20/95	8/3/95	8/3/95	1/10/96	8/3/95	8/3/95	8/3/95
Report Date:			8/9/95	8/2/95	8/10/95	8/10/95	1/12/96	8/9/95	8/9/95	8/9/95
Chit No.:			1648	1767	1791	1791	2144/2145	1793	1793	1793
Analytes and Methods										
* wipe samples are in ug/wipe										
CCR Title 22 Metals - Total (TTLC)										
Antimony	mg/Kg	500			ND(5.0)	ND(5.0)				
Arsenic	mg/Kg	500			15	15				
Asbestos	fibers/g	1.0								
Barium	mg/Kg	10000			260	200				
Beryllium	mg/Kg	75			ND(0.5)	ND(0.5)				
Cadmium	mg/Kg	100			4.7	3.7				
Chromium	mg/Kg	2500			3300	2500		150	3.3	41
Chromium (VI)	mg/Kg	500			180	210				
Cobalt	mg/Kg	8000			20	16				
Copper	mg/Kg	2500			190	180				
Fluoride Salts	mg/Kg	18000								
Lead	mg/Kg	1000			1700	1100	1300	650	12	49
Mercury	mg/Kg	20			0.2	0.15				
Molybdenum	mg/Kg	3500			6.8	10				
Nickel	mg/Kg	2000			150	170				
Selenium	mg/Kg	100			ND(5.0)	ND(5.0)				
Silver	mg/Kg	500			ND(0.50)	ND(0.5)				
Thallium	mg/Kg	700			ND(5.0)	8.5				
Vanadium	mg/Kg	2400			41	36				
Zinc	mg/Kg	5000			10000	7600		540	48	210
EPA Methods 6010 and 7470 - TCLP Metals										
Barium	mg/L	100.0	0.46	0.74			0.40			
Cadmium	mg/L	1.0	0.032	0.021			0.010			
Chromium	mg/L	5.0	0.62	1.9			2.2			
Lead	mg/L	5.0	3.9	0.20			ND(0.10)			
Mercury	mg/L	0.2	ND(0.0002)	ND(0.0002)			ND(0.0002)			
All Other 6010/7470 Compounds	mg/L		ND	ND			ND			
Unreported Methodology										
pH	pH units	>2 and <12.5								
SM 5520E&F Modified										
Total Recoverable Petroleum HCs	mg/Kg			2200						
EPA Methods 8015 Mod/8020 - TPH with BTEX										
Benzene	mg/Kg									
Toluene	mg/Kg									
Ethyl Benzene	mg/Kg									
Xylenes	mg/Kg									
TPH as Gasoline	mg/Kg									

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

		Source:	Vegetation Pile northeastern quadrant sample A4	Rainwater collection tank sediments Tanks 1, 2, and 3	Containment Vault (CV) Sludge	CV Sludge, Pickling Tanks Sludge and Brick
		Sample Date:	8/3/95	6/13/95	10/13/95	12/4/95
		Report Date:	8/9/95	6/22/95	10/26/95	12/7/95
		Chit No.:	1793	1666	1982	Chromalab
Analytes and Methods		Units*	Limits			
* wipe samples are in ug/wipe						
CCR Title 22 Metals - Total (TTLC)						
Antimony	mg/Kg	500		ND(5.0)	ND(5.0)	Notes: ND mg/kg mg/L g Not Detected. Milligrams per kilogram. Milligrams per liter. Gram.
Arsenic	mg/Kg	500		ND(5.0)	ND(5.0)	
Asbestos	fibers/g	1.0				
Barium	mg/Kg	10000		220	5.8	
Beryllium	mg/Kg	75		ND(0.5)	ND(0.5)	
Cadmium	mg/Kg	100		4.2	ND(0.5)	
Chromium	mg/Kg	2500	14	840	33	
Chromium (VI)	mg/Kg	500		ND(0.5)	ND(0.5)	
Cobalt	mg/Kg	8000		13	ND(2.5)	
Copper	mg/Kg	2500		360	7.4	
Fluoride Salts	mg/Kg	18000			ND(1.0)	
Lead	mg/Kg	1000	53	1700	510	
Mercury	mg/Kg	20		0.37	ND(0.020)	
Molybdenum	mg/Kg	3500		ND(2.5)	ND(2.5)	
Nickel	mg/Kg	2000		110	2.7	
Selenium	mg/Kg	100		19	ND(5.0)	
Silver	mg/Kg	500		ND(0.5)	ND(0.5)	
Thallium	mg/Kg	700		6.8	ND(5.0)	
Vanadium	mg/Kg	2400		34	ND(2.5)	
Zinc	mg/Kg	5000	140	3100	24	
EPA Methods 8010 and 7470 - TCLP Metals						
Barium	mg/L	100.0				
Cadmium	mg/L	1.0				
Chromium	mg/L	5.0				
Lead	mg/L	5.0				ND(1.0)
Mercury	mg/L	0.2				
All Other 8010/7470 Compounds						
mg/L						
Unreported Methodology						
pH	pH units	>2 and <12.5				
SM 5520EaF Modified						
Total Recoverable Petroleum HCs	mg/Kg					
EPA Methods 8015 Mod/8020 - TPH with BTEX						
Benzene	mg/Kg	0.12				
Toluene	mg/Kg	0.23				
Ethyl Benzene	mg/Kg	ND(0.10)				
Xylenes	mg/Kg	0.35				
TPH as Gasoline	mg/Kg	43				

Table 9. Analytical Data Summary for Liquid Waste Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

			Source: Cylindrical aboveground acid storage tank liquid	Eastern (PPY-1) pickling tank liquid composite from 4 samples	Middle (PPY-2) pickling tank liquid composite from 4 samples	Western (PPY-3) pickling tank liquid composite from 4 samples	Initial containment vault liquid sample	Containment vault liquid eastern (DIS-1) sample	Containment vault liquid middle (DIS-2) sample	Containment vault liquid western (DIS-3) sample	Containment vault liquid filtered through a 100 micron filter
Sample Date:			7/24/95	4/13/95	4/13/95	4/13/95	6/26/95	7/24/95 + 7/5/96	7/24/95 + 7/5/96	7/24/95 + 7/5/96	8/24/95
Report Date:			7/31/95	5/9/95	5/9/95	5/9/95	6/27/95	8/1/95 + 7/13/96	8/1/95 + 7/13/96	8/1/95 + 7/13/96	8/25/95
Chit No.:			1774	1475	1475	1475	1676	1764 + Quan.	1764 + Quen.	1764 + Quan.	1833
Analytes and Methods			Units	Limits							
Unreported Methodology											
pH	pH units	>2 and <12.5		1.5	1.0	2.0	6.0	6.3	6.2	6.2	
Chemical Oxygen Demand	mg/L							ND(20)	250	27	
Cyanide - Total	mg/L						ND(0.1)	ND(0.01)	ND	ND(0.01)	
Flash Point	Celsius	>60						>100	>100	>100	
Fluoride	mg/L		ND(10)	ND(10)	ND(10)	ND(10)	ND(0.10)	ND(1.0)	ND	ND(1.0)	
Phenolics - Total	mg/L							ND(0.05)	ND(0.05)	ND(0.05)	
Sulfide - Dissolved	mg/L						ND(13)	ND(0.10)	ND(0.10)	ND(0.10)	
Total Suspended Solids	mg/L							63	1100	25	
Acidity as mg of CaCO3/liter	mg/L						38				
CCR Title 22 Metals - Total (TTLC) - With STLC Limits											
Arsenic	mg/L	5.0	ND(0.10)	ND(5.0)	ND(5.0)	ND(5.0)	0.13	ND(0.10)	ND(0.10)	ND(0.10)	
Asbestos	fibers/g										
Barium	mg/L	100	ND(0.10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(0.10)	ND(0.10)	ND(0.10)	0.33	
Cadmium	mg/L	1.0	2.0	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.01)	ND(0.01)	ND(0.01)	0.016	
Chromium	mg/L	5	ND(0.01)	420	40	240	0.093	ND(0.01)	ND(0.20)	1.3	
Copper	mg/L	25	16	30	5.3	1.7	ND(0.01)	ND(0.01)	0.034	0.67	
Fluoride Salts	mg/L	180									
Lead	mg/L	5.0	ND(0.10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(0.10)	ND(0.10)	0.25	2.8	ND(0.10)
Mercury	mg/L	0.2	ND(0.01)	0.013	ND(0.01)	ND(0.01)	ND(0.0002)	ND(0.0002)	ND(0.0002)	0.001	
Nickel	mg/L	20	ND(0.05)	2.6	12	ND(2.5)	ND(0.05)	ND(0.05)	ND(0.05)	0.26	
Zinc	mg/L	250	40	23	32	7.7	0.28	0.11	0.26	3.6	
All other Title 22 metals			ND	ND	ND	ND	ND	ND	ND	ND	
CCR Title 22 Chapter 11 Appendix XI - Organic Lead Test Method											
Organic Lead Compounds (TTLC=13mg/kg)	mg/L	no STLC						0.8	2.1	0.92	0.68
EPA Methods 8010 and 7470 - TCLP Metals											
Arsenic	mg/L	5.0		0.64	1.7	0.21					
Cadmium	mg/L	1.0		0.037	0.026	0.025					
Chromium	mg/L	5.0		370	27	210					
Lead	mg/L	5.0		1.2	1.8	ND(0.20)					
Mercury	mg/L	0.2		ND(0.001)	0.001	ND(0.001)					
All other TCLP metals				ND	ND	ND					

**Table 9. Analytical Data Summary for Liquid Waste Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

			Source: Cylindrical aboveground acid storage tank liquid	Eastern (PPY-1) pickling tank liquid composite from 4 samples	Middle (PPY-2) pickling tank liquid composite from 4 samples	Western (PPY-3) pickling tank liquid composite from 4 samples	Initial containment vault liquid sample	Containment vault liquid eastern (DIS-1) sample	Containment vault liquid middle (DIS-2) sample	Containment vault liquid western (DIS-3) sample	Containment vault liquid filtered through a 100 micron filter
Sample Date:			7/24/05	4/13/05	4/13/05	4/13/05	6/26/05	7/24/05 + 7/5/06	7/24/05 + 7/5/06	7/24/05 + 7/5/06	8/24/05
Report Date:			7/31/05	5/9/05	5/9/05	5/9/05	6/27/05	8/1/05 + 7/13/06	8/1/05 + 7/13/06	8/1/05 + 7/13/06	8/25/05
Chit No.:			1774	1475	1475	1475	1676	1764 + Quan.	1764 + Quan.	1764 + Quan.	1833
Analytes and Methods			Units	Limits							
EPA Method 624/8240 - Volatile Organics											
All 624/8240 Compounds			ug/L	ND							
EPA Method 625 Modified/8270 - Semivolatile Organics											
All 625 Modified/8270 Compounds			ug/L	ND							
EPA Method 8015 Modified - Extractable Hydrocarbons											
TEPH as Diesel			mg/Kg	ND(40)							
Extractable HC as Jet Fuel			mg/Kg	ND(40)							
Extractable HC as Motor Oil			mg/Kg	ND(400)							
EPA Method 8080 - Organochlorine Pesticides and Polychlorinated Biphenyls											
PCBs (1010, 1221, 1232, 1242, 1248, 1254, 1260)			ug/L	ND							
EPA Method 8150 - Chlorinated Herbicides											
All 8150 Compounds			ug/L	ND							
EPA Method 8280 - Dioxins and Furans											
HpCDFs (total)			ng/L	0.84 ND(0.61) ND(0.20)							
OCDD			ng/L	6.8 3.3 0.79							
1,2,3,4,6,7,8-HpCDF			ng/L	0.27 ND(0.61) ND(0.20)							
OCDF			ng/L	0.67 ND(0.31) ND(0.46)							
HpCDD (total)			ng/L	1.6 0.78 ND(0.31)							
1,2,3,4,6,7,8-HpCDD			ng/L	0.03 0.46 ND(0.31)							
All other 8280 Compounds			ng/L	ND ND ND							
Standard Method (SM) 5520B Modified											
Total Oil and Grease			mg/L	ND(5.0) ND(5.0) ND(5.0)							
SM 5520B&F Modified											
Total Recoverable Petroleum Hydrocarbons			mg/L	ND(5.0) ND(5.0) ND(5.0)							

**Table 9. Analytical Data Summary for Liquid Waste Sampled During Removal Activity
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

Source:	Cylindrical aboveground acid storage tank liquid	Eastern (PPY-1) pickling tank liquid composite from 4 samples	Middle (PPY-2) pickling tank liquid composite from 4 samples	Western (PPY-3) pickling tank liquid composite from 4 samples	Initial containment vault liquid sample	Containment vault liquid eastern (DIS-1) sample	Containment vault liquid middle (DIS-2) sample	Containment vault liquid western (DIS-3) sample	Containment vault liquid filtered through a 100 micron filter
Sample Date:	7/24/95	4/13/95	4/13/95	4/13/95	6/26/95	7/24/95 + 7/5/96	7/24/95 + 7/5/96	7/24/95 + 7/5/96	8/24/95
Report Date:	7/31/95	5/9/95	5/9/95	5/9/95	6/27/95	8/1/95 + 7/13/96	8/1/95 + 7/13/96	8/1/95 + 7/13/96	8/25/95
Chit No.:	1774	1475	1475	1475	1676	1764 + Quan.	1764 + Quan.	1764 + Quan.	1833

Analytes and Methods

Units

Limits

Notes:

ND Not Detected.

mg/L Milligrams per liter.

g Gram.

ug/L Micrograms per liter.

Table 10. Summary of Waste Tracking
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Waste Type	Verified Quantity	Date(s) of Reference Sample(s)	Laboratory*	Date Taken Offsite	Manifest/ Bill of Lading	Disposal Facility*	Notification of Facility Receipt
Manifested as RCRA Hazardous Waste							
Liquid from Pickling Tanks	42880 lbs	4/13/95	Sequoia	6/15/95	95462709	Eticam	6/15/95
Liquid from Pickling Tanks	42540 lbs	4/13/95	Sequoia	6/15/95	95462710	Eticam	6/15/95
Liquid from Pickling Tanks	42420 lbs	4/13/95	Sequoia	6/15/95	95462711	Eticam	6/15/95
Liquid from Pickling Tanks	37700 lbs	4/13/95	Sequoia	6/16/95	95462712	Eticam	6/19/95
Liquid from Pickling Tanks	33300 lbs	4/13/95	Sequoia	6/16/95	95462713	Eticam	6/19/95
Dirt Pile #2 (1 Bin)	15 cy	4/10/95	Sequoia	6/20/95	93752786	Laidlaw	6/20/95
Dirt Pile #3 (2 Bins)*	30 cy	5/10/95	Sequoia	7/19/95	95458810	Laidlaw	7/20/95
Dirt Pile #3 (1 Bin)*	15 cy	5/10/95	Sequoia	8/7/95	95458811	Laidlaw	8/7/95
Wooden Debris (1 Bin)	20 cy	none		8/7/95	95458812	Laidlaw	8/7/95
Wooden Debris (1 Bin)	20 cy	none		8/7/95	95458814	Laidlaw	8/8/95
Wooden Debris (1 Bin)	20 cy	none		8/7/95	95458815	Laidlaw	8/7/95
Wooden Debris (1 Bin)	20 cy	none		8/7/95	95458816	Laidlaw	8/7/95
Wooden Debris (1 Bin)	20 cy	none		8/7/95	95458813	Laidlaw	8/8/95
Wooden Debris (2 Bins)	25 cy	none		8/7/95	95458822	Laidlaw	8/17/95
Dirt Mixed with Concrete - NW Quadrant	18 cy	none		8/17/95	95458823	Laidlaw	8/17/95
Dirt Mixed with Concrete - NW Quadrant	18 cy	none		8/17/95	95458824	Laidlaw	8/17/95
Dirt Mixed with Concrete - NW Quadrant	18 cy	none		8/17/95	95458825	Laidlaw	8/18/95
Dirt Mixed with Concrete - NW Quadrant	18 cy	none		8/17/95	95458826	Laidlaw	8/17/95
Dirt Mixed with Concrete - NW Quadrant	18 cy	none		8/17/95	95458827	Laidlaw	8/18/95
Vegetative Debris (2 Bins)	38 cy	8/3/95	Sequoia	8/21/95	95458831	Laidlaw	8/21/95
Personal Protective Equipment, PVC Pipe	30 cy	none		10/17/95	95458852	Laidlaw	10/17/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/6/95	95458833	Laidlaw	11/6/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/6/95	95458834	Laidlaw	11/6/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/6/95	95458835	Laidlaw	11/6/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/6/95	95458836	Laidlaw	11/6/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95883322	Laidlaw	11/7/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95883324	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95883325	Laidlaw	11/10/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95458837	Laidlaw	11/7/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95458838	Laidlaw	11/7/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95458839	Laidlaw	11/7/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95458840	Laidlaw	11/7/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95883330	Laidlaw	11/7/95
Concrete, Veg. Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/7/95	95883331	Laidlaw	11/7/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883306	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883307	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883308	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883309	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883310	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883311	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883312	Laidlaw	11/8/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883313	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883314	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883315	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883316	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883317	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883326	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883327	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/8/95	95883328	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883329	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883364	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883365	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883366	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883367	Laidlaw	11/9/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883368	Laidlaw	11/10/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883369	Laidlaw	11/10/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883370	Laidlaw	11/10/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883371	Laidlaw	11/10/95
Concrete Debris, Dirt Piles #4 & #6	18 cy	multiple	Sequoia	11/9/95	95883372	Laidlaw	11/10/95

Table 10. Summary of Waste Tracking
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Waste Type	Verified Quantity	Date(s) of Reference Sample(s)	Laboratory*	Date Taken Offsite	Manifest/ Bill of Lading	Disposal Facility*	Notification of Facility Receipt
Manifested as RCRA Hazardous Waste (continued)							
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883373	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883374	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883375	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883378	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883379	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883380	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883381	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883382	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883383	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883384	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883385	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/13/95	95883386	Laidlaw	11/13/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883441	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883442	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883443	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883444	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883445	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883446	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883447	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883448	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt in SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883449	Laidlaw	11/16/95
Concrete Debris, Dirt Pile #6	18 cy	multiple ¹	Sequoia	11/17/95	95883453	Laidlaw	11/17/95
Concrete Debris, Dirt Pile #6	10 cy	multiple ¹	Sequoia	11/17/95	95883455	Laidlaw	11/17/95
Concrete, Dirt, Plastic and Wood from ZCCA	18 cy	multiple ¹	Sequoia	11/17/95	95883450	Laidlaw	11/17/95
Concrete, Dirt, Plastic and Wood from ZCCA	18 cy	multiple ¹	Sequoia	11/17/95	95883451	Laidlaw	11/17/95
Concrete, Dirt, Plastic and Wood from ZCCA	18 cy	multiple ¹	Sequoia	11/17/95	95883452	Laidlaw	11/17/95
Dirt (1 Bin)	12 cy	multiple ¹	Sequoia	12/14/95	95883458	Laidlaw	12/14/95
Dirt (1 Bin)	12 cy	multiple ¹	Sequoia	12/14/95	95883460	Laidlaw	12/15/95
Dirt (2 Bins)	22 cy	multiple ¹	Sequoia	12/14/95	95883459	Laidlaw	12/14/95
Manifested as Non-RCRA (California) Hazardous Waste							
Dirt Pile #1	18 cy	1/24/95	Sequoia	3/31/95	93752716	Laidlaw	3/31/95
Asbestos from Buildings 422 and 423	20 cy	none		3/31/95	93752715	Cal Asbestos Monofil	4/7/95
Personal Protective Equipment	18 cy	none		6/20/95	93752787	Laidlaw	6/20/95
Concrete Bedded with Dirt from Pile #5	18 cy	multiple ¹	Sequoia	11/6/95	95458868	Laidlaw	11/6/95
Concrete Bedded with Dirt from Pile #5	18 cy	multiple ¹	Sequoia	11/6/95	95458869	Laidlaw	11/6/95
Concrete, Dirt Pile #6, Dirt from SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95458870	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt from SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883333	Laidlaw	11/16/95
Concrete, Dirt Pile #6, Dirt from SE Quadrant	18 cy	multiple ¹	Sequoia	11/16/95	95883334	Laidlaw	11/16/95
Cylindrical Aboveground Acid Storage Tank	25000 lbs	7/24/95	Sequoia	12/1/95	95592726	Erickson	12/4/95
Asbestos Covered Piping from Pickling Tanks	1 cy	none		12/15/95	95458884	B&J Sanitary	12/18/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	93019103	Laidlaw	12/18/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	93752772	Laidlaw	12/18/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458879	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458880	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458881	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458882	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458883	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458885	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458886	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458887	Laidlaw	12/15/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458888	Laidlaw	12/18/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458890	Laidlaw	12/18/95
Vault Sludge, Pickling Tanks Bricks & Sludge	18 cy	12/4/95	Chromalab	12/15/95	95458891	Laidlaw	12/18/95
Dirt (1 Bin)	20 cy	1/10/96	Sequoia	2/8/96	95832739	ECDC	2/16/96
Dirt (1 Bin)	20 cy	1/10/96	Sequoia	2/8/96	95832740	ECDC	2/22/96
Dirt (1 Bin)	20 cy	1/10/96	Sequoia	3/7/96	95832742	ECDC	3/25/96

Table 10. Summary of Waste Tracking
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Waste Type	Verified Quantity	Date(s) of Reference Sample(s)	Laboratory*	Date Taken Offsite	Manifest/ Bill of Lading	Disposal Facility ^b	Notification of Facility Receipt
Manifested as Non-Hazardous Waste							
Secondary Containment Vault Liquid	3911 gal	7/24/95	Sequoia	10/2/95	34701	Enviropure West	10/2/95
Secondary Containment Vault Liquid	4582 gal	7/24/95	Sequoia	10/2/95	34702	Enviropure West	10/2/95
Secondary Containment Vault Liquid	3958 gal	7/24/95	Sequoia	10/3/95	34703	Enviropure West	10/3/95
Secondary Containment Vault Liquid	4727 gal	7/24/95	Sequoia	10/3/95	34704	Enviropure West	10/3/95
Secondary Containment Vault Liquid	4116 gal	7/24/95	Sequoia	10/3/95	34705	Enviropure West	10/3/95
Secondary Containment Vault Liquid	2859 gal	7/24/95	Sequoia	10/3/95	34706	Enviropure West	10/3/95
Secondary Containment Vault Liquid	4361 gal	7/24/95	Sequoia	10/3/95	34707	Enviropure West	10/3/95
Secondary Containment Vault Liquid	5181 gal	7/24/95	Sequoia	10/4/95	34708	Enviropure West	10/4/95
Secondary Containment Vault Liquid	4799 gal	7/24/95	Sequoia	10/4/95	34709	Enviropure West	10/4/95
Secondary Containment Vault Liquid	4535 gal	7/24/95	Sequoia	10/4/95	34710	Enviropure West	10/4/95
Secondary Containment Vault Liquid	4674 gal	7/24/95	Sequoia	10/4/95	34711	Enviropure West	10/4/95
Secondary Containment Vault Liquid	5037 gal	7/24/95	Sequoia	10/4/95	34712	Enviropure West	10/4/95
Secondary Containment Vault Liquid	3851 gal	7/24/95	Sequoia	10/4/95	34713	Enviropure West	10/4/95
Secondary Containment Vault Liquid	4619 gal	7/24/95	Sequoia	10/4/95	34714	Enviropure West	10/4/95
Secondary Containment Vault Liquid	4762 gal	7/24/95	Sequoia	10/5/95	34715	Enviropure West	10/5/95
Secondary Containment Vault Liquid	4705 gal	7/24/95	Sequoia	10/5/95	34716	Enviropure West	10/5/95
Secondary Containment Vault Liquid	4516 gal	7/24/95	Sequoia	10/5/95	34717	Enviropure West	10/5/95
Secondary Containment Vault Liquid	4119 gal	7/24/95	Sequoia	10/5/95	34718	Enviropure West	10/5/95
Secondary Containment Vault Liquid	2559 gal	7/24/95	Sequoia	10/5/95	34719	Enviropure West	10/5/95
Secondary Containment Vault Liquid	4759 gal	7/24/95	Sequoia	10/6/95	34720	Enviropure West	10/6/95
Secondary Containment Vault Liquid	4220 gal	7/24/95	Sequoia	10/6/95	34721	Enviropure West	10/6/95
Secondary Containment Vault Liquid	4769 gal	7/24/95	Sequoia	10/6/95	34722	Enviropure West	10/6/95
Secondary Containment Vault Liquid	3795 gal	7/24/95	Sequoia	10/6/95	34723	Enviropure West	10/6/95
Secondary Containment Vault Liquid	2913 gal	7/24/95	Sequoia	10/6/95	34724	Enviropure West	10/6/95
Rinse Water ^c	1000 gal	No Sample Collected		12/19/95	NH-N 2171	McKittrick ^d	12/21/95
Bills of Lading							
Steel Drying Racks	18400 lbs	multiple ^e	Sequoia	11/27/95	HP4001	Circosta	Not Applicable
Steel Drying Racks	22200 lbs	multiple ^e	Sequoia	11/27/95	HP4002	Circosta	Not Applicable
Steel Drying Racks	19400 lbs	multiple ^e	Sequoia	11/27/95	HP4003	Circosta	Not Applicable
Steel Drying Racks	24320 lbs	multiple ^e	Sequoia	11/27/95	HP4004	Circosta	Not Applicable
Steel Drying Racks	24520 lbs	multiple ^e	Sequoia	11/27/95	HP4005	Circosta	Not Applicable
Steel Drying Racks	18860 lbs	multiple ^e	Sequoia	11/27/95	HP4006	Circosta	Not Applicable
Steel Drying Racks	18060 lbs	multiple ^e	Sequoia	11/27/95	HP4007	Circosta	Not Applicable
Steel Drying Racks	21240 lbs	multiple ^e	Sequoia	11/27/95	HP4008	Circosta	Not Applicable
Steel Drying Racks	19180 lbs	multiple ^e	Sequoia	11/27/95	HP4009	Circosta	Not Applicable
Steel Drying Racks	19440 lbs	multiple ^e	Sequoia	11/27/95	HP4010	Circosta	Not Applicable
Steel Drying Racks	17220 lbs	multiple ^e	Sequoia	11/28/95	HP4011	Circosta	Not Applicable
Steel Drying Racks	19520 lbs	multiple ^e	Sequoia	11/28/95	HP4012	Circosta	Not Applicable
Steel Drying Racks	18520 lbs	multiple ^e	Sequoia	11/28/95	HP4013	Circosta	Not Applicable
Steel Drying Racks	17880 lbs	multiple ^e	Sequoia	11/28/95	HP4014	Circosta	Not Applicable
Steel Drying Racks	13360 lbs	multiple ^e	Sequoia	11/28/95	HP4015	Circosta	Not Applicable
Scrap Metal from Pile	17440 lbs	none		12/8/95	#001	Circosta	Not Applicable
Scrap Metal from Pile	39620 lbs	none		12/8/95	#002	Circosta	Not Applicable
Scrap Metal from Pile	24400 lbs	none		12/8/95	#003	Circosta	Not Applicable
Scrap Metal from Pile	42560 lbs	none		12/8/95	#004	Circosta	Not Applicable
Other							
Demolished Steel Pickling Tanks	unknown	none	Shipped	11/24/95-12/1/96	none	Schnitzer Steel Mill	Not Applicable
Rectangular Aboveground Acid Storage Tank	unknown	none	None	12/13/95	none	another HPA site	Not Applicable
Overhead Crane Structure Braces	unknown	none	Dismantled	7/24/96	none	Schnitzer Steel Mill	Not Applicable
Overhead Crane Structure Beams and Columns	unknown	none	Dismantled	7/24/96	none	Salvaged for reuse	Not Applicable

- * Full names and locations of laboratories appear at the end of table.
- ^b Full names and locations of receiving facilities appear at end of table.
- ^c Quantity of soil in Dirt Pile #3 was estimated as 30 cy when sampled.
- ^d One foot of dirt and vegetation was used as bedding to protect the trailer from the concrete and rebar.
- ^e Concrete sampled 8/15/95.
- ^f Vegetative debris sampled 8/3/95.
- ^g Dirt Pile #4 sampled 5/10/95.
- ^h Dirt Pile #6 sampled 8/3/95.
- ⁱ One foot of dirt was used as bedding to protect the trailer from concrete and rebar.
- ^j Southeastern quadrant soil not sampled.
- ^k Assorted mixture of last remaining concrete and dirt from piles around the site and zinc chromate control area structure.
- ^l A combination of dirt from Dirt Pile #4 and #6; see g and h.
- ^m Plastic and wood from zinc chromate control area not sampled.
- ⁿ Visibly clean concrete (sand blasted) sampled 9/13/95.
- ^o Dirt Pile #5 sampled 7/20/95.
- ^p Includes rinse water from containment vault, pickling tanks, rectangular AAST, and steel drying racks.
- ^q McKittrick evaporates the liquid waste streams and disposes of the precipitating solids at onsite landfill.

Table 10. Summary of Waste Tracking
Draft Final Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Shipyard

Wipe samples were taken on the steel racks on 8/29/95 and 9/12/95.

LABORATORY INFORMATION

Sequoia Analytical
Walnut Creek, California

Quanterra Environmental Services
W. Sacramento, California

Chromalab, Inc.
Pleasanton, California

RECEIVING FACILITY INFORMATION

Eticam
Fernley, Nevada

Laidlaw Environmental Services
Buttonwillow, California

California Asbestos Monofil
Copperopolis, California

B & J Sanitary Landfill
Vacaville, California

Erickson, Inc.
Richmond, California

ECDC Environmental
East Carbon, Utah

Refineries Services dba Enviropure West
Patterson, California

McKittrick Waste Treatment Site
McKittrick, California

Circosta Iron and Metal, Inc.
San Francisco, California

Schmitzer Steel Mill
Oakland, California

PLATES

INNES AVE.
JERROLD AVE.
KIRKWOOD AVE.
NAVY ROAD
TO U.S. 101
MAIN GATE
DONAHUE ST.
GALVEZ AVE.
HPA SALVAGE STORAGE AREA
GATE
DRYDOCK 3
DRYDOCK 2
CRISP AVE.
PICKLING & PLATE YARD AVE.
SPEAR ST.
HUSSEY ST.
MORRELL ST.
BLANDY ST.
NIMITZ AVE.
SAN FRANCISCO BAY
6TH AVE.
"H"
"J"
MANSEAU ST.
MAHAN ST.
HUNTERS POINT BOUNDARY
SAN FRANCISCO BAY
HUNTERS POINT ANNEX
SAN FRANCISCO
BERKELEY
80
580
680
580
280
101
92
84

HAUL ROUTE

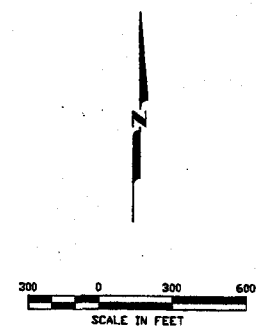
TRAFFIC BARRIERS

HPA = HUNTERS POINT ANNEX
ACCESS TO THE WORK SITE IS THROUGH MAIN GATE.




VICINITY MAP

HUNTERS POINT ANNEX SAN FRANCISCO, CA



IF SHEET IS LESS THAN
30" x 42"
IT IS A REDUCED PRINT -
SCALE REDUCED ACCORDINGLY

DRAWN: DJH		PROJECT NO: 11400 1108		 Harding Lawson Associates Engineering and Environmental Services	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ENGINEERING FIELD ACTIVITY WEST San Bruno, California		LOCATION MAP		PLATE: 1
ENGINEER:		SCALE: VARIES			Pickling and Plate Yard Removal Action, Construction Summary Report Hunters Point Annex San Francisco, California				SHEET: 1 of 8
CHECKED:		APPROVED: <i>Mark J. [Signature]</i>							REVISION NUMBER: 0
BY: CHK		DATE: 6/4/99							DATE: 04/15/98
NO. DATE		REVISIONS							

813

SPEAR AVE.

HUSSEY ST.

402

STORAGE RACK AREAS
 DRYING RACK AREAS
 12-FOOT-TALL THIN METAL WALL
 ABOVEGROUND RECTANGULAR ACID STORAGE TANK
 PICKLING TANK SECONDARY CONTAINMENT VAULT
 THREE PICKLING TANKS
 ABOVEGROUND PHOSPHORIC ACID STORAGE TANK

IR09MW45F

421

420

419

424

418

417

411A

COCHRANE ST.

DRYING RACK AREAS

411

EXPLANATION

IR09MW31

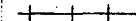
MONITORING WELL AND WELL NUMBER



PARTIALLY DEMOLISHED DRYING RACK AREAS



PARTIALLY DEMOLISHED STORAGE RACK AREAS



RAILROAD TRACKS

422

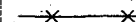
EXISTING BUILDING TO BE DEMOLISHED

813

EXISTING BUILDING (TO BE LEFT IN PLACE)



OVERHEAD CRANE ASSEMBLY



EXISTING FENCE



UTILITY TRENCH



STORM DRAIN INLETS

40 0 40 80
 SCALE IN FEET

DRAWN: DJH
 ENGINEER: DJH
 CHECKED: DJH
 BY: DJH

PROJECT NO: 11400 1109
 SCALE: 1"=40'
 APPROVED: *[Signature]*
 DATE: 6/1/95

Harding Lawson Associates
 Engineering and Environmental Services
 PREPARED UNDER HWY CLEAN CONTRACT TO
 PREPARE ENVIRONMENTAL MANAGEMENT

ENGINEERING FIELD ACTIVITY WEST
 Pickling and Plate Yard Removal Action, Construction Summary Report
 Hunters Point Annex
 San Francisco, California

PRE-EXISTING SITE CONDITIONS PLAN

PLATE: 2
 SHEET: 2 OF 8
 REVISION NUMBER: 0
 DATE: 04-115/95



Harding Lawson Associates
Engineering and
Environmental Services

DRAWN
DJPC

JOB NUMBER
11400 1109

Project Organization Chart
Pickling and Plate Yard Removal Action
Construction Summary Report
Hunters Point Annex
San Francisco, California

APPROVED
JL

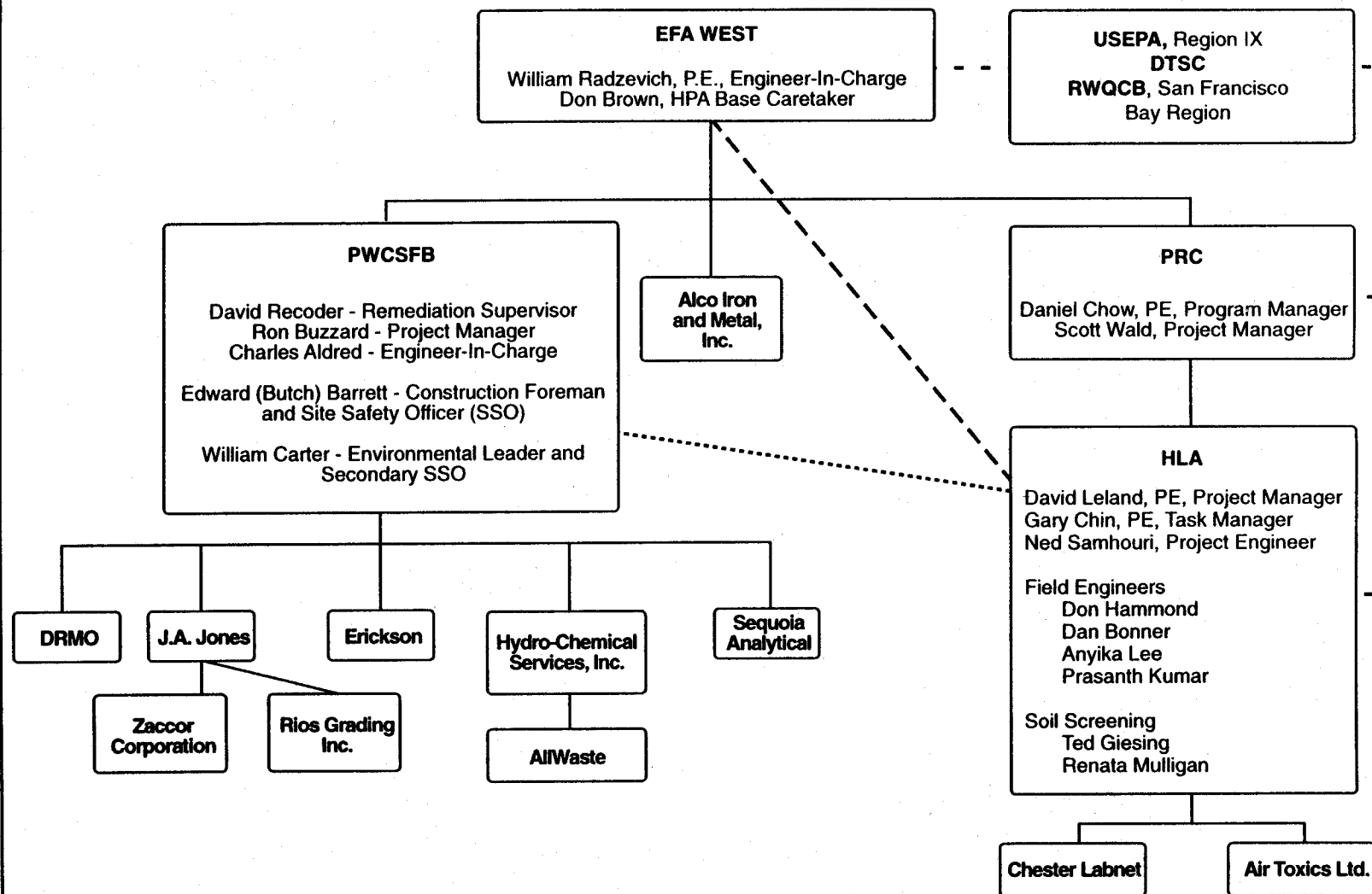
DATE
7/96

REVISED DATE

3

PLATE

072496DJPC



RELATIONSHIPS

- Contractual Reporting
- Construction Oversight and Environmental Sampling
- Consultation
- - - - - Regulatory Oversight

Harding Lawson Associates
Engineering and
Environmental Services

DRAWN
CN

JOB NUMBER
11400 1109

APPROVED
McJunk

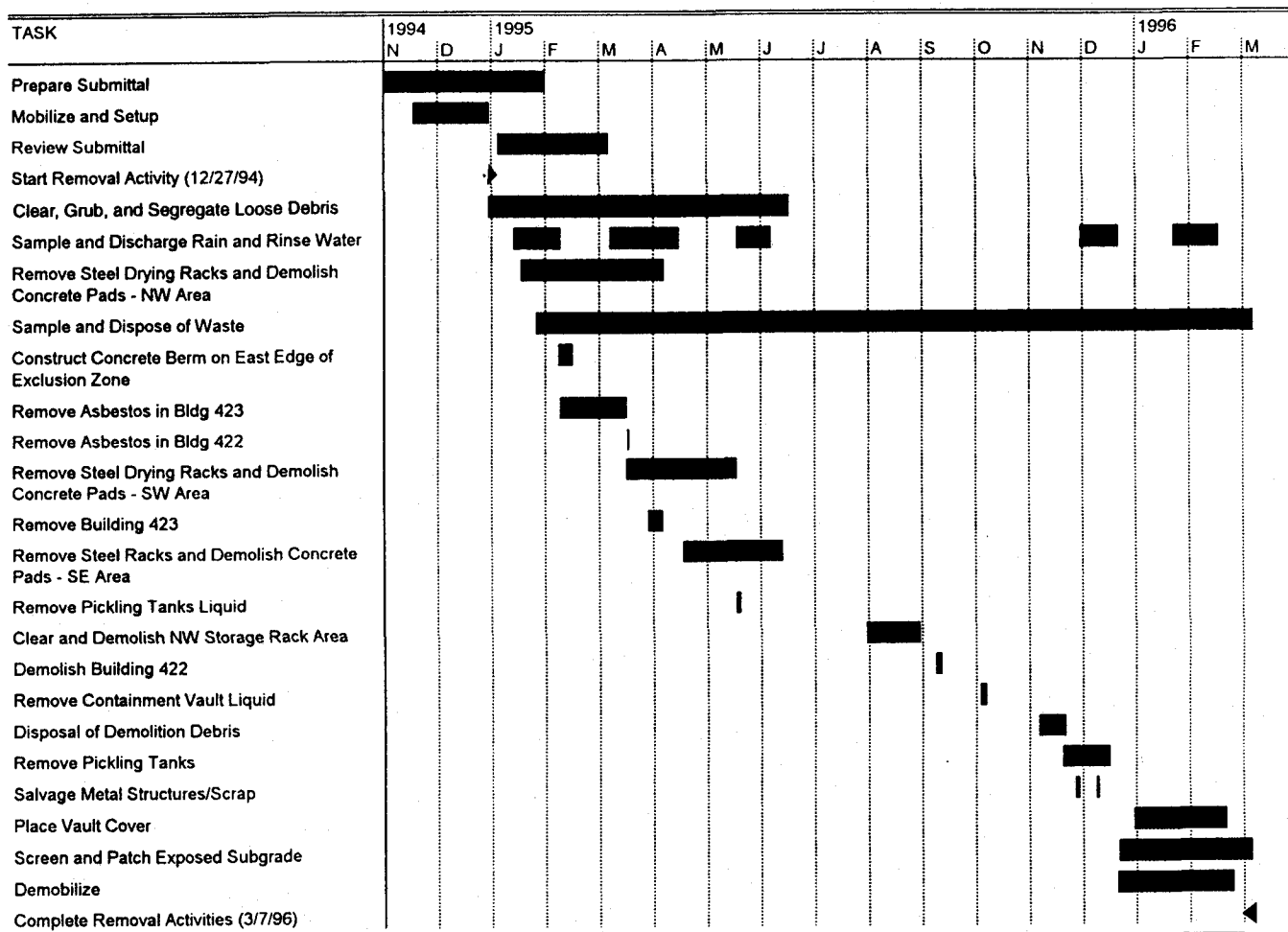
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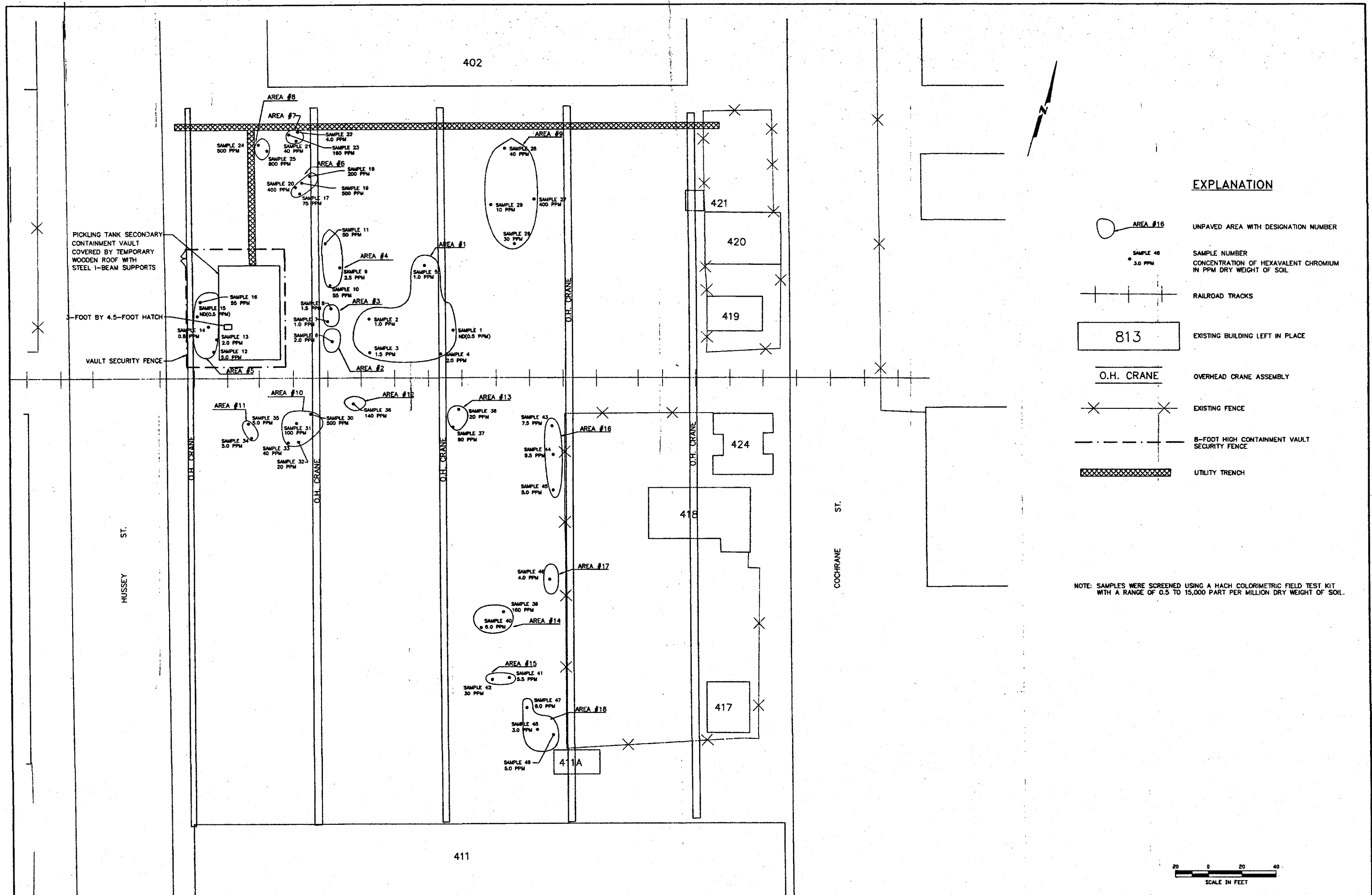
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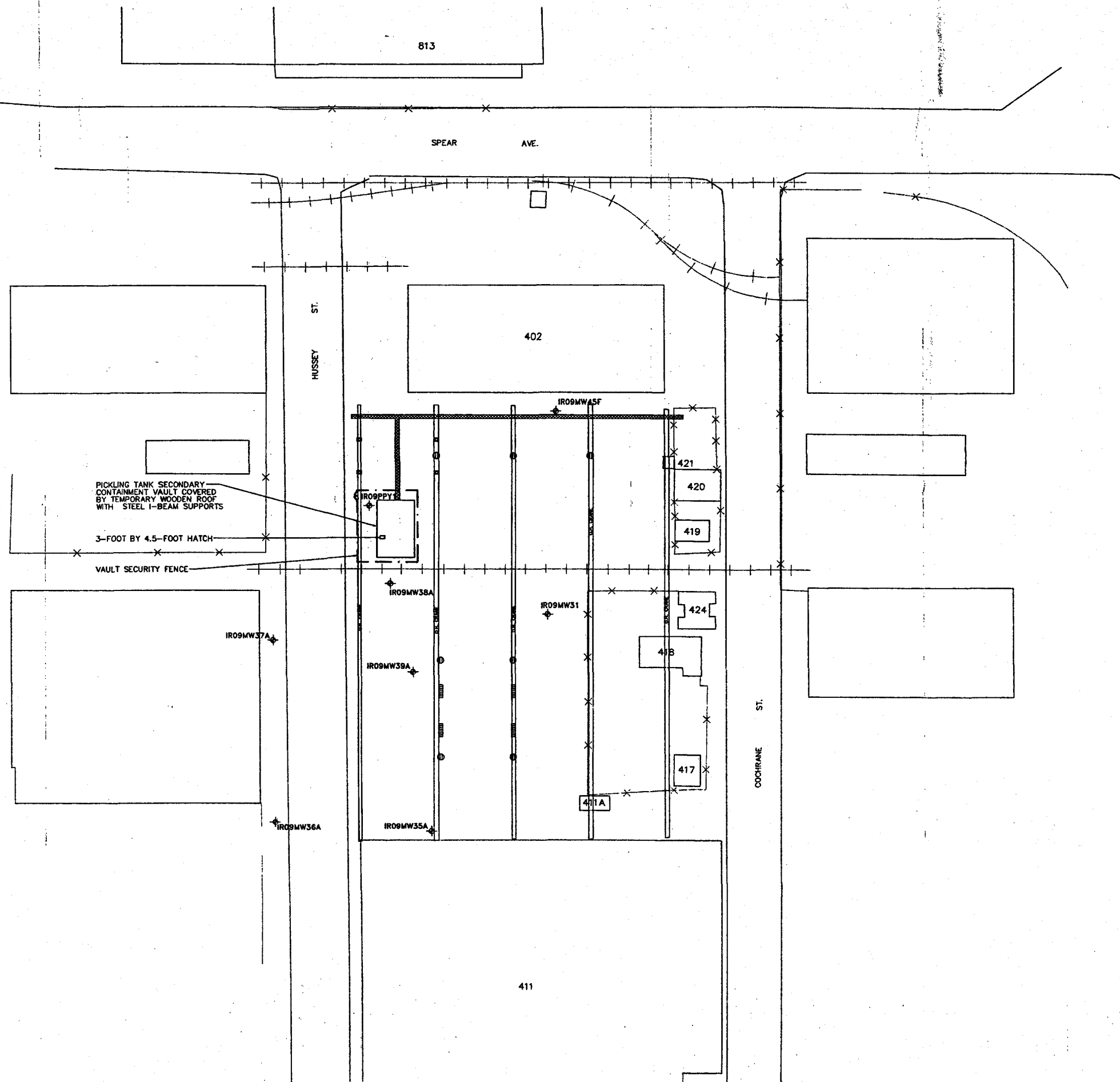
Actual Project Schedule
Pickling and Plate Yard Removal Action
Construction Summary Report
Hunters Point Annex
San Francisco, California

4

PLATE







EXPLANATION

- CRANE TOWER WITH TIGHTLY ADHERED ZINC CHROMATE RESIDUE
- MONITORING WELL AND WELL NUMBER
- RAILROAD TRACKS
- EXISTING BUILDING LEFT IN PLACE
- OVERHEAD CRANE ASSEMBLY
- EXISTING FENCE
- 8-FOOT HIGH CONTAINMENT VAULT SECURITY FENCE
- UTILITY TRENCH
- STORM DRAIN INLETS

NOTE: THIS PLATE REPRESENTS SITE CONDITIONS AS OF THE FINAL SITE WALK ON MARCH 19, 1996.



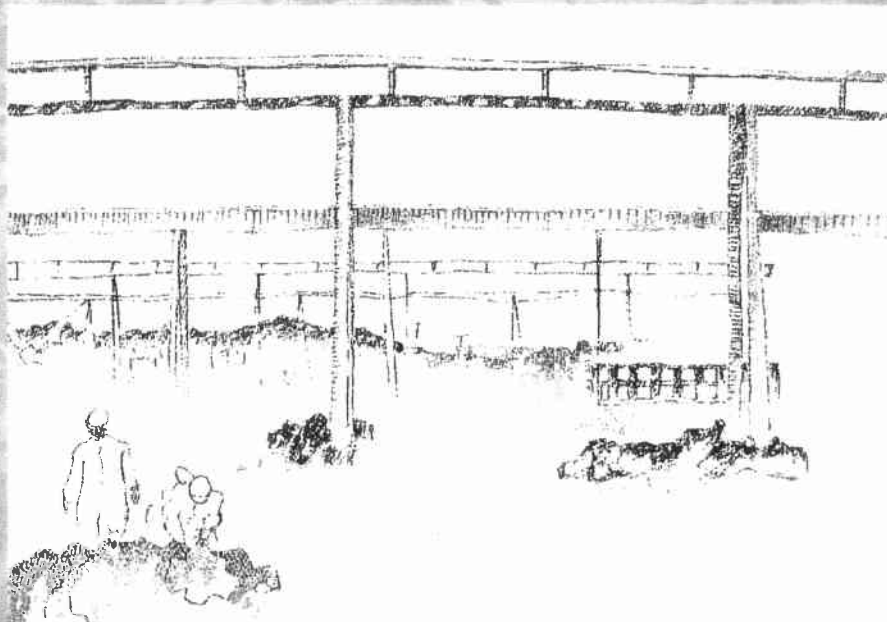
DRAWN: DJM ENGINEER: DJM CHECKED: DJM DATE: 2/23/96		PROJECT NO: 11400 1108 SCALE: 1"=40' APPROVED: DJM DATE: 2/23/96		Harding Lawson Associates Engineering and Environmental Services PREPARED UNDER MARY CLEAN CONTRACT TO PHC ENVIRONMENTAL MANAGEMENT		DEPARTMENT OF THE BAY ENGINEERING FIELD ACTIVITY WEST Pickling and Plate Yard Removal Action, Construction Summary Report Hunters Point Annex San Francisco, California		FINAL SITE CONDITIONS PLAN		PLATE: 8 SHEET: 8 of 8 REVISION NUMBER: 0 DATE: 04/15/96	
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Contract No. N62474-88-D-5086

FINAL
Construction Summary Report
Pickling and Plate Yard Removal Action



Hunters Point Shipyard
San Francisco, California



VOLUME II of II
APPENDICES
JUNE 18, 1999

**Final Construction Summary Report
Pickling and Plate Yard Removal Action
Hunters Point Shipyard
San Francisco, California**

Volume II of II

Prepared for

Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-0720

Subcontract 5083-90-057-004, CTO 245

HLA Project No. 42535 00172

Under Contract to:

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June 18, 1999



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APPENDIX A

NAVY RESPONSES TO AGENCY COMMENTS

**Navy Responses (Dated 6/99) to EPA Comments (Dated 6/98)
on Navy Responses (Dated 2/97) to EPA Comments (Dated 10/96)
Draft Construction Summary Report (7/96)
Pickling and Plate Yard, Hunters Point Shipyard**

The following presents the Navy's responses to the United States Environmental Protection Agency, Region IX, (EPA) comments (received on June 22, 1998) regarding Navy Responses (dated February 6, 1997) to EPA Comments (dated October 22, 1996) on the *Draft Construction Summary Report, Pickling and Plate Yard Removal Action, Hunters Point Shipyard*, dated July 31, 1996. Each EPA comment is reproduced here followed by the Navy's related response.

EPA COMMENTS RECEIVED ON JUNE 22, 1998

Comment 1. **Response to General Comment 1.** The response provides useful information but does not fully respond to the comment. EPA would like to have the response include a clear description regarding how waste characterization was conducted for the various waste streams generated during the PPY disposal action. Please explain in greater detail, if possible, the step by step process used to characterize the various PPY waste streams (concrete, steel/metal, soil, debris, rainwater, rinse water, etc.).

Response: The revised Section 4.5 of the report documents waste disposal for the various waste streams based upon records provided by Navy Public Works Center (NPWC). NPWC personnel who characterized and disposed of the waste are no longer working for NPWC, and therefore are not available to provide additional or missing information beyond what is included in the report.

As detailed in revised Section 4.5, the following describes steps taken to characterize and dispose of the waste:

Concrete (Section 4.5.2.1) – Constituents of Concern (COCs): zinc and chromium from zinc chromate (ZC), a paint primer present on the surface of the concrete

- Concrete debris was segregated according to visual evidence of ZC on the concrete surface. ZC was easily identified based upon its distinct yellowish-green color.
- Two decontamination methods were initially tested on a visibly contaminated side of a 3 by 2 by 1-foot block: high-pressure hot water blasting and wet-abrasive blasting (WAB). Sand was used as the blasting medium. WAB was found to be more effective in removing visible ZC from concrete surface.
- After decontamination of the test block, nine samples were collected from the decontamination area from the following locations: three surface samples, three samples 1 to 3 inches below the surface, two samples from 4 to 4.5 inches below the surface, and one sample from the core of the block. Analytical results of all these samples were below Title 22 (California Code of Regulations) Total Threshold Level Concentration (TTLC) hazardous

waste levels.

- Although results indicated that WAB was effective in removing ZC from the concrete, it was decided to dispose of the blocks as hazardous waste without decontaminating the blocks. Decontaminating all the ZC from concrete surfaces would have required a large number of confirmation samples and would have taken a long period of time (it took about 30 minutes to remove the ZC from one surface using the WAB method).
- Concrete debris with heavy ZC surface contamination was disposed of as RCRA hazardous waste at Laidlaw's Class I landfill in Buttonwillow, California.
- Analytical data collected from the concrete surface on the decontaminated test block (where no ZC was visibly present) showed COCs to be below Title 22 TTLCs. As a result, concrete debris that was free from visible evidence of ZC was disposed of as non-RCRA (California) hazardous waste in Laidlaw's Class I landfill in Buttonwillow, California.

Steel Racks and Scrap Metal (Section 4.5.2.2) – Constituents of Concern (COCs): zinc, chromium, and lead from zinc chromate and lead-based paint.

- Large steel racks were cut using a torch into sections that could be handled by a small forklift. Other metal debris was stockpiled.
- It appeared that some of the racks and scrap metal had ZC and/or lead-based paint.
- Peeling paint and loosely-adhered ZC residue on the racks were hot water blasted and/or hand-chipped off the steel surface. Rinse water was stored in Baker tanks. Ten wipe samples were collected randomly from 30 percent of the cleaned rack surfaces and analyzed for the COCs. Analytical results from the samples indicated concentrations below the TTLC limits.
- The metal material was transported to Circosta Iron and Metal Company, San Francisco, California, a scrap metal transfer facility.

General Vegetative Debris and Soil Piles (Section 4.5.2.3) – Constituents of Concern (COCs): zinc, chromium, and lead from zinc chromate and lead-based paint

- The scrap metal debris pile was transported to the soil piles and then disposed of as RCRA hazardous waste at Laidlaw's Class I landfill at Buttonwillow, California.
- Debris and vegetative removal resulted in segregated piles of wood construction debris, vegetative debris, and soil. It was decided that it would take too much time and require too many samples to segregate hazardous from non-hazardous materials. As a conservative approach, all wooden and vegetative debris were considered to be RCRA hazardous waste, and were

disposed of at Laidlaw's Class I landfill in Buttonwillow, California.

- Removal activities generated six soil piles. Composite soil samples were collected from each pile and were analyzed for COCs. Analytical results from Piles 2, 3, 4, and most of 6 indicated hazardous concentrations of COCs. This soil was disposed of as RCRA hazardous waste at Laidlaw's Class I landfill. Results from Piles 1, 5, and some of 6 indicated the soil to be non-hazardous; this soil was disposed of as non-RCRA (California) hazardous waste at Laidlaw's Class 1 landfill.

Piping Insulation, Fiberboard Siding, Pickling Tank Insulation (Sections 4.5.2.4 and 4.5.2.5) – Constituent of Concern: Asbestos

- Material from the piping insulation and fiberboard siding was assumed to be asbestos containing material (ACM) and was disposed of at California Asbestos Monofil, Copperopolis, California.
- Insulation removed from the decommissioning of pickling tanks was assumed to be ACM and was transported to B&J Sanitary Landfill, Vacaville, California.

Pickling Tank Sludge and Bricks and Containment Vault Sludge (Section 4.5.2.5) – Constituents of Concern: Metals and asbestos

- Five waste types were removed during decommissioning of three pickling tanks: brick and asphaltic adhesive, ACM, sludge, and scrap metal.
- Insulation was considered to be ACM and was disposed of at B&J Sanitary Landfill, Vacaville, California.
- A sample of the containment vault sludge was collected and analyzed for metals. Results were below TTLHC hazardous waste levels.
- A composite sample was also collected from the remaining mixed waste (bricks and sludge) and was analyzed for lead. No lead was detected.
- Although the materials probably were not hazardous based on the analytical information, to be conservative they were disposed of as non-RCRA (California) hazardous waste at Laidlaw's Class I landfill.
- Containment vault sludge was disposed as non-RCRA (California) hazardous waste at Laidlaw's Class I landfill.

Cylindrical AAST (Section 4.5.2.5)

- A 25,000 gallon cylindrical steel aboveground acid storage tank (AAST) which contained residual (less than 2-inches) liquid at the bottom of the tank. The residual liquid was sampled and found to contain cadmium above the STLC. The tank was manifested as an "empty container" and transported to Erikson, Richmond, California, a permitted treatment, storage, and disposal facility. Erikson cleaned the tank, and disposed of rinsate as hazardous waste.

Liquid Wastes (Sections 4.5.2.5, 4.5.2.6, 4.5.3.2) – Constituents of Concern: Total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and metals.

Pickling Tank Contents (Section 4.5.2.5)

- Liquids and sludge from three pickling tanks were sampled and analyzed for TPH, PCB, and metals. Analytical results were non-detect for organic constituents, but contained metals at concentrations above Soluble Threshold Limit Concentration (STLC) hazardous waste levels.
- The liquid was treated and disposed as a hazardous waste at Eticam, East Fernley, Nevada, a TSDF facility.
- Sludge was dried at HPS to a thickness of less than 1 inch and disposed as non-RCRA (California) hazardous waste at Laidlaw's Class I landfill along with the pickling tank sludge and bricks waste (Section 4.5.2.5).

Containment Vault Contents (Section 4.5.2.6)

- A 16-foot deep containment vault contained about 6 inches of sludge and 13 feet of liquid. Composite samples of liquid from the vault were collected and analyzed. Analytical results were below San Francisco Department of Public Works (SFDPW) sanitary sewer discharge levels for lead. The liquid was transported to Refinery Services, Patterson, California for treatment and disposal. The sludge was disposed as non-RCRA (California) hazardous waste at Laidlaw's Class I landfill.

Rainwater (Section 4.5.3.2)

- Samples were collected from rainwater that accumulated in exclusion zone for disposal into the SFDPW sanitary sewer. Results indicated that the liquid was nonhazardous and met SFDPW requirements. The liquid was discharged to the sanitary sewer.

Rinsate Water (Section 4.5.3.2)

- Water used for dust control and to clean the site was stored in Baker tanks or left standing in decontamination containment areas. It was sampled and disposed with rainwater from February to June 1995. After June, the rinse water evaporated from the containment areas.
- Rinsate water generated during cleaning of the steel racks and the containment vault (rinsate and blasting water) was stored in a Baker tank, and transported to McKittrick Waste Treatment Facility, McKittrick, California for treatment.

Comment 2. Response to General Comment 3: It is still unclear how the liquid wastes were characterized. Please elaborate.

Response: See response to General Comment 1, "Liquid Wastes".

In general, liquid wastes were characterized, as detailed in the report, and then were disposed of either by discharging the liquid into SFDPW's sanitary sewer (rainwater) after meeting the requirements of the SFDPW discharge permit, or transporting the liquid to a permitted hazardous waste treatment facility (rinsate and containment vault liquids).

Comment 3. Response to General Comment 4: For the record, EPA disagrees with the Navy's assertion that it was appropriate to dry out the pickling tank sludge and dispose of it as non-RCRA hazardous with the pickling tank.

Response: Comment noted.

Comment 4. Response to Specific Comment 6: Why didn't the Navy sample the blasting water? Couldn't it be hazardous? Please clarify.

Response: The blasting water was stored with the rinsate water from cleaning of the containment vault and steel racks. Most of the rinsate was generated from cleaning of the containment vault. Analytical results from sampling the liquid in the vault showed nonhazardous levels. Therefore, although the rinsate was not sampled, it seems unlikely that it was hazardous. Although the blasting/rinsate water was not sampled, it was treated at McKittrick, a permitted waste treatment facility. Receipt of the water at McKittrick was included as an attachment in the February 1997 Response to Comments.

Comment 5. Response to Specific Comment 12. Was the rinse water sampled for characterization? If not, why not? Couldn't it have been hazardous? Please clarify.

Response: See previous response. Most of the rinsate was generated from cleaning of the containment vault. Analytical results from sampling the liquid in the vault generally showed nonhazardous levels. Therefore, although the rinsate was not sampled, it seems unlikely that it was hazardous if the containment vault liquid was nonhazardous.

Comment 6. Response to Specific Comment 15. For the record, EPA continues to have concerns with the Navy's characterization and disposal of the PPY waste streams as described in the response to this comment.

Response: Comment noted.

Comment 7. Response to Specific Comment 18. Again, for the record, EPA disagrees with the Navy's assertion that it was appropriate to dry out the pickling tank sludge and dispose of it as non-RCRA hazardous with the pickling tank bricks. In addition, EPA continues to believe that an argument could be made that the pickling tank sludge meets the definition of a listed hazardous waste under RCRA.

Response: California Code of Regulations, Title 22, Section 66261.32 lists hazardous wastes under RCRA. Pickling waste, listed under EPA Hazardous Waste Number K062 for iron and steel, is described as "Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC codes 331 and 332)". SIC Code 331 is "Blast furnace and basic steel products", and SIC Code 332 is "Iron and steel foundries". HPS was a Naval Base and would not be classified under either of these SIC Codes.

Comment 8. Response to Specific Comment 19. EPA is confused about the response to this comment. The response refers to revised Table 7. However, revised Table 7 simply states "not sampled" for the containment vault rinse water. Please clarify the response.

Response: The rinsate water was not sampled prior to being transported to McKittrick Treatment Facility where it was treated.

**NAVY RESPONSES TO EPA COMMENTS ON THE
DRAFT CONSTRUCTION SUMMARY REPORT
PICKLING AND PLATE YARD REMOVAL ACTION
HUNTERS POINT SHIPYARD**

The following presents the Navy's responses to the United States Environmental Protection Agency (EPA), Region IX, comments regarding the *Draft Construction Summary Report, Pickling and Plate Yard Removal Action, Hunters Point Shipyard*, dated July 31, 1996. The report is referred to herein as the CSR. The comments were presented in a letter from Claire Trombadore, EPA, to William Radzevich, Engineering Field Activity West (EFA West), dated October 22, 1996. Each EPA comment is reproduced here followed by the Navy's related response.

EPA LETTER DATED OCTOBER 22, 1996

General Comments:

Please discuss the rationale for waste characterization during the project. It is unclear why some wastes were subjected to TCLP analysis, some to TTLC and some to both. In addition, please discuss how the wastes that were analyzed using TTLC only were determined to be non-RCRA hazardous waste and thus best disposed of as California and not RCRA wastes. EPA is particularly concerned with that the pickle tank sludge may have been a RCRA waste (section 4.5.2.6).

Please clarify the waste classification wording. Non-RCRA hazardous can be misinterpreted to mean non-hazardous waste as opposed to California waste.

In general, Section 4.5 of the document needs to be revised to better explain the waste characterization and disposal for the PPY removal action.

Please include references to the appropriate tables in waste characterization discussions.

Responses:

Presented below is the rationale for characterization of the various waste streams during the removal activities at the Pickling and Plate Yard. Note that the six waste streams that are of concern to the EPA are addressed both in the following items and in the Specific Comments section.

1. Concrete: Originally, characterization of concrete debris was to be performed according to the test methods and analyses (i.e., TTLC, WET, and TCLP) and for the constituents listed in Section 4.6 of Harding Lawson Associate's *Removal Action for Pickling and Plate Yard (IR-9). Volume I Work Plan, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California*, dated April 26, 1991 (Work Plan). The purpose of testing the concrete debris was to evaluate its suitability for disposal as nonhazardous waste after it was "sandblasted and wiped off" according to Section 4.4 of the Work Plan. The Navy, however, proposed in Field Variance (FV)06 of the CSR, dated October 19, 1995, that the concrete debris contaminated with zinc chromate (ZC) residue be disposed as hazardous waste, at Class I treatment, storage, and disposal (TSD) facilities, for the reasons and benefits described in FV06. The EPA and California EPA Department of Toxic Substances Control (DTSC) concurred with the Navy proposal. The Navy Public Works Center, San Francisco Bay (PWCSFB) collected several concrete samples from visibly and non-visibly contaminated concrete blocks to characterize this waste stream for proper disposal as hazardous waste.

as described in the CSR (Section 4.5.2.1 and Table 8). Based on the concrete samples analytical results, field visual inspection for the presence of ZC residue was performed to segregate the debris into RCRA or non-RCRA (i.e., California) hazardous waste. Although a large percentage of the debris was expected to be nonhazardous, this conservative approach allowed for expediting the concrete debris disposal activities without further delay and minimized additional testing costs. Table A-1, attached, summarizes final disposal and treatment methods for the concrete.

2. Soil, Vegetation, and General Solid Debris: The 1991 Work Plan did not specifically address the removal and characterization of the soil, vegetation, and general solid debris (i.e., wood, trash, metal pieces and glass) encountered during the removal activities. The Navy, however, exercised a conservative approach in dealing with these debris, resulting in the ultimate disposal of all the sand, wood, vegetation, and trash as RCRA or California hazardous waste. This approach was based on available analytical results obtained from the dirt piles and visual evidence of ZC contamination on the general solid debris surfaces.

Testing and analysis of the accumulated soil piles by TTLC and/or TCLP were conducted mainly to establish the basis for soil segregation into RCRA or non-RCRA (i.e., California) hazardous waste. It is possible that some small amount of potentially RCRA hazardous waste was inadvertently mixed with or disposed as non-RCRA (i.e., California) hazardous waste loads. All the soil originating from the Pickling and Plate Yard, however, was disposed at Class I landfills.

The general solid debris, with the exception of metal pieces, was disposed conservatively as RCRA hazardous waste at Laidlaw's Class I Landfill due to time and budget constraints. Table A-2, attached, summarizes soil and general solid debris disposal and treatment methods. The metal pieces were decontaminated by vigorous shaking and water blasting, then segregated from the above debris and salvaged as scrap metal with the steel racks.

3. Liquid Wastes: All rainwater, dust control water, and cleaning water generated during the project, in addition to liquids in the pickling tanks and containment vault liquids, were properly characterized and disposed as described in the CSR. In only one case, a 1,000-gallon shipment of rinse water (generated during steel rack water blasting, aboveground acid storage tank (AAST) decontamination, and pickling tank/containment vault decontamination) was manifested as nonhazardous liquid without characterization. This liquid was disposed at the McKittrick Waste Treatment Site in McKittrick, California, a fully permitted Class II TSD Facility. The Generator's Waste Profile for this liquid is attached to this document. According to McKittrick personnel, the liquid waste streams handled by this facility typically undergo oil/water separation before the water is placed in a triple-lined pond for solar evaporation. Upon water evaporation, the precipitating solids are sampled and analyzed prior to disposal at an onsite, double-lined landfill. Table A-3, attached, summarizes the disposal and treatment methods applicable to the 1,000-gallon liquid waste.

4. Pickling Tank Sludge and Bricks: The pickling tank contents remaining after the liquid was removed as RCRA hazardous waste, were mainly the bricks and a thin layer (less than 1 inch thick) of dry sludge at the bottom of the three tanks. The 1991 Work Plan called only for testing the pickling tank bricks to evaluate them for disposal as either hazardous or nonhazardous waste. Prior to the removal action, the sludge at the bottom of the pickling tanks was characterized as reported in EMCON's *Confirmation Study Verification Step, Hunters Point Naval Shipyard (Disestablished) San Francisco, California, Volumes I and II*, dated March 19, 1987, and the results of the sludge characterization indicated that it may have been a RCRA hazardous waste. It is unclear if characteristics of the sludge evaluated in 1987 were similar to the characteristics of the sludge remaining following liquid removal in 1995. The containment vault sludge was sampled on October 10, 1995, and analyzed for California Code of Regulations (CCR), Title 22 inorganic toxic substances. The analytical results (Table 8 of the CSR) indicated that the TTLC values for toxicity characteristics were not exceeded. Due to the methodology used during the removal of the pickling tanks as detailed in Section 4.4.5.2, it was inevitable that the pickling tank sludge became mixed with the bricks and the containment vault sludge. However, from our observation and in our estimate, the pickling tank sludge and containment vault sludge constituted less than 1.5 cubic yards (cy) and 0.5 cy of dry solids, respectively, of the 234 cy of mostly brick debris. Therefore, the resulting debris waste stream consisting of the pickling tank sludge and bricks and the containment vault sludge was managed as non-RCRA (i.e., California) hazardous waste, on the basis of the composite sample collected from the generated debris, and the total volume of the debris versus the volume of the sludge. This waste was disposed at Laidlaw's Class I Landfill in Buttonwillow, California. Table A-4 attached, summarizes the disposal method of the sludge and bricks generated during pickling tank removal.
5. Non-RCRA Hazardous Waste: According to the California Code of Regulations, Title 22, Article 2 - **Definitions**, Section 66260.10, "**Non-RCRA Hazardous Waste** means all hazardous waste regulated in the State, other than RCRA hazardous waste." Therefore, throughout the text of the CSR, the term non-RCRA hazardous waste is synonymous with California Hazardous Waste and such material was indeed managed as California Hazardous Waste and disposed at Class I TSD facilities. Section 4.5 of the CSR will be revised to clarify this definition.

Specific Comments

Comment 1: Draft Construction Summary Report, Section 4.2.3, Background Ambient Air Monitoring, page 9, first sentence, and Table 2. The text states that background air monitoring was performed over four days in September 1994. Table 2, which presents the results of the background air monitoring for total particulates and metals, also lists sampling conducted on 30 December 1994. The 30 December 1994 air monitoring results are not representative of background levels since removal activities began on 27 December 1994. The 30 December data should be removed from Table 2 and the Table revised for mean background total particulate and metal concentrations. EPA is bringing this error to the Navy's attention to ensure that similar errors do not occur in any future air monitoring background calculations.

Response: The December 30, 1994, air monitoring results were inadvertently included with the background air monitoring results for total particulates and metals. The December 30, 1994, results were removed from Table 2 of the CSR and the table was revised for mean background total particulate and metal concentrations. The revised Table 2 is attached to this document.

Comment 2: Section 4.3.2, page 11. Construction of the berm was completed February 14, 1995. What was done to keep precipitation from entering the site surface inlet drains within the drainage boundary prior to and during its construction. Please discuss in the text.

Response: The site surface storm drain inlets drain directly into the stormwater catch basins inside the exclusion zone (EZ). During the site preparation phase, PWCSFB lined the stormwater catch basins around the perimeter of the EZ with PVC pipes and plugged the bottoms of the catch basins with concrete. The catch basins acted as sumps to collect accumulating rainwater, rinse water, and/or dust control water. Sump pumps were then used to pump water from the sumps to the 20,000-gallon storage tanks. Clarification of these activities will be added to Section 4.3.2 in the Draft Final CSR.

Comment 3: Section 4.3.3, page 11. This section says 2 of the 3 tanks are inside the bermed area of the SZ. However, the next paragraph states that the 3 tanks are located in the secondary containment. Please clarify whether secondary containment is synonymous with the bermed area (Plate 6 shows all 3 tanks inside the berm).

Response: "Secondary containment area" is synonymous with "the bermed area of the support zone" (SZ). All three 20,000-gallon storage tanks were inside the secondary containment area. The first paragraph in Section 4.3.3, however, refers to the fact that the volumes of only two of the three storage tanks were used to estimate the additional water storage volume needed at the site, as illustrated in the notes for Table 6 in the CSR. This method of estimation and the number of tanks contained in SZ's bermed area will be clarified in the Draft Final CSR.

Comment 4:

Section 4.4.1, page 13, 3rd paragraph. The first sentence states that the concrete debris was visually screened and stockpiled for direct disposal. According to the work plan (section 4.6 and elsewhere) the concrete was to be sampled for metals for characterization prior to disposal. Please discuss how was it visually determined whether the concrete contained metals requiring restricted disposal.

Response:

The presence of ZC residue was determined visually in the field on the basis of the distinct yellowish-green paint on the surface of the concrete. Since the color of ZC is readily detected, the segregation of concrete debris into RCRA hazardous or non-RCRA (California) hazardous waste was accomplished in the field.

Concrete debris with heavy surface ZC contamination was disposed as RCRA hazardous waste (64 loads) based on core samples collected on August 15, 1995, from a visibly contaminated concrete block.

Concrete debris that had little ZC overspray or that was free from visible evidence of such contamination was classified using the concrete core sample results collected on September 13, 1995 from the sand-blasted concrete block (Table 8 of the CSR, Pages 1 and 2 of 6). As a conservative measure, five loads of blocks with little or no visible contamination were shipped and disposed as non-RCRA (i.e., California) hazardous waste.

Comment 5:

Section 4.4.1, page 13, last paragraph. Please clarify whether all concrete debris was disposed as hazardous waste. Please reference tables as appropriate.

Response:

All concrete debris generated during the removal activities was disposed as hazardous waste at Laidlaw's Class I Landfill as listed in revised Table 10 of the CSR under Manifested as RCRA Hazardous Waste and Manifested as Non-RCRA Hazardous Waste." Details regarding the concrete debris disposal and treatment are summarized in Table A-1, attached.

Comment 6:

Section 4.4.1, page 14, 1st paragraph. State what happened to the blasting water and the residue removed from the racks. Please reference tables as appropriate.

Response:

The blasting water was pumped out of the lined stormwater catch basin and was disposed without characterization, and treated as discussed earlier in our response to General Comments, at the McKittrick Waste Treatment Site along with the rinse water generated during the decontamination of the secondary containment vault. This item was discussed in Section 4.5.3.2 (under Rinse Water) and in Section 4.6.1 (under Cleaning) and it was listed in Table 7 (under Containment Vault Rinse Water) and Table 10 (Page 3 of 4) of the CSR. These sections and tables will be referenced in the text of the Draft Final CSR. Tables 7 and 10 have been revised to include the rinse water from the steel racks, containment vault, pickling tanks, and rectangular aboveground acid storage tank (AAST). The revised CSR tables and a summary of liquid waste disposal (Table A-3) are attached.

The ZC residue (chips) removed from the steel racks by water blasting accumulated either in the lined catch basin or on the asphalt pavement inside the EZ. These ZC chips were collected during the various stages of the project and were disposed as RCRA hazardous waste along with other RCRA hazardous waste solid debris. This method of disposal will be clarified in Section 4.4.1. Attached Table A-2 summarizes the disposal and treatment of this waste.

Comment 7: **Section 4.4.2, page 14. Please discuss the fate of the building foundation. Discuss disposition, if appropriate, of the hazardous contents (i.e., PCB light ballasts, fluorescent lighting, etc.) of the building.**

Response: Building 423 foundation debris was collected in piles with other concrete debris inside the EZ and was later disposed as RCRA hazardous waste at Laidlaw's Class I Landfill, as described in Section 4.5.2.1 of the CSR and summarized in the attached Table A-1. The only other hazardous contents in the building were the side panels that contained nonfriable asbestos. The side panels were disposed at California Asbestos Monofil, as described in Section 4.5.2.4 of the CSR.

Comment 8: **Section 4.4.3, page 14. Please discuss the disposition of the building foundation. Discuss disposition, if appropriate of the hazardous contents (i.e. PCB light ballasts, fluorescent lighting, etc.) of the building.**

Response: Building 422 foundation and structural debris was piled with other concrete debris inside the EZ and later disposed as RCRA hazardous waste at Laidlaw's Class I Landfill, as summarized in attached Table A-1. As discussed in Section 4.5.2.1 of the CSR, the only other hazardous contents were the piping with asbestos insulation. Those contents were disposed at California Asbestos Monofil, as described in Section 4.5.2.4.

Comment 9: **Section 4.4.6, page 16. State what was done with the concrete debris and the rinse water. Discuss how the concrete was sampled and disposed.**

Response: The concrete debris generated from the demolition of the 5,000-gallon AAST foundation was segregated and piled with other concrete debris generated during removal activities. The debris was later disposed as RCRA hazardous waste at Laidlaw's Class I Landfill on the basis of visible evidence of contamination and the results of the core samples collected from a visibly contaminated concrete block on August 15, 1995. Disposal methods were described in Section 4.5.2.1 of the CSR and summarized in attached Table A-1.

The rinse water generated during the decontamination of the tank was treated at the McKittrick Waste Treatment Site, a Class II TSDF along with the rinse water generated during the high-pressure water blasting of the steel racks, as discussed in the Navy's responses to General Comments and summarized in attached Table A-3.

Comment 10: **Section 4.4.8, page 17. The first bullet says the debris was segregated by visible evidence of contamination. Please elaborate. Discuss the visible evidence was used (dirt, paint residue, etc.), how the debris was segregated and the reason(s) for segregation.**

Response:

The debris found inside the EZ was segregated into various categories of material (e.g., trash, wooden debris, metal pieces, and glass), as illustrated in Photographs 2 and 4 in Appendix C of the CSR. Initially, all wooden debris was to be segregated, according to visible evidence of ZC contamination, as probably hazardous or probably nonhazardous pending disposal characterization. Due to time and budget constraints, however, the trash, glass, and all the wooden debris were ultimately disposed as RCRA hazardous waste without characterization. The disposal of this debris is described in Section 4.5.2.3 of the CSR and summarized in attached Table A-2.

The metal pieces were placed in the scrap metal pile and decontaminated using the methods discussed in Section 4.5.2.2 (i.e., shaking and pressure washing) to remove loosely adhered ZC residue. The removed ZC residue was eventually disposed with other solid debris as RCRA hazardous waste. The scrap metal and steel racks were shipped to Schnitzer Steel Mill for offsite recycling.

Comment 11:

Section 4.4.9, page 17. Please state what was or is going to be done with the ZC adhering to the crane rails. If it is going to be left there indefinitely, so state. Will the crane rails be salvaged?

Response:

The crane rails with tightly adhering ZC residue were screened by EFA West, PRC, HLA, and PWCSFB during the final site walkthrough on March 19, 1996. It was decided that the overhead cranes were safe, non-hazardous, and suitable for salvage, as discussed in Section 5 of the CSR, based upon the small amount of tightly adhering ZC relative to the total mass of the overhead crane structure. According to the Navy's metal salvage contractor, Alco Iron and Metal, Inc., the overhead crane structure was dismantled by July 24, 1996. Parts of the crane's support members (i.e., braces) were transported to Schnitzer Steel Mill for offsite recycling, and the beams and columns were salvaged and stored on-site for reuse.

Comment 12:

Section 4.5.1, pages 17-18. The pickle tank and rectangular AAST decontamination solutions are not listed. Please state what was done with these liquids.

Response:

The rinse water generated from decontaminating the pickling tanks was disposed as nonhazardous liquid along with the rinse water generated from the decontamination of the secondary containment vault, as listed in the fourth bullet from the bottom of Section 4.5. This combined rinse water (1,000 gallons total) was treated at McKittrick Waste Treatment Site, as mentioned in Section 4.6 of the CSR. (See also our response to General Comments and Comment 19, on this issue.)

This clarification of the details of liquid disposal will be included in the Draft Final CSR. Tables 7 and 10 of the CSR (attached) have been revised to reflect this fact. Attached Table A-3 summarizes the disposal of the rinse water.

Rinse water from the rectangular AAST was pumped into a Baker (storage) tank and disposed with rinse water generated during decontamination of the pickling tanks and containment vault, as discussed above.

Comment 13:

Section 4.5.2.1, page 20, last paragraph. This paragraph states that 5 loads of concrete were manifested as carrying non-RCRA hazardous waste. EPA assumes the Navy means that this waste is not RCRA hazardous waste but California waste. Please clarify and explain basis for waste characterization.

Response:

According to the definition of non-RCRA hazardous waste cited in our response to General Comments, the five loads of concrete manifested as non-RCRA hazardous waste were disposed as California hazardous waste at Laidlaw's Class I Landfill (see attached Table A-1). These five concrete debris loads shipped on November 6, and 16, 1996, are listed under Manifested as Non-RCRA Hazardous Waste (Page 2 of 4) in Table 10 of the CSR. The hazardous waste manifests for the loads are included in Appendix D.

The waste characterization for this debris was based on the lack of visible ZC residue evidence, as described in the Navy's responses to General Comments and Comment 4, above.

Comment 14:

Section 4.5.2.2, page 21, 1st paragraph. There seems to be confusion between the intent of the effort discussed in the work plan and what was actually performed in the way of ZC removal. For instance, the work plan (p. 19, 4th paragraph) says the ZC needs to be removed to render the structure a non-hazardous waste such that it can be recycled or disposed. This paragraph says that the remaining ZC was allowed to remain on the structure since it was going to a smelting facility. Please clarify that the smelter may accept metal with ZC. Please confirm whether or not scrap metal is exempt from RCRA.

Response:

Section 4.4. of the Work Plan called for evaluating the steel racks, after dismantling, for recycling. The ZC-contaminated steel racks and metal pieces were decontaminated by hand-chipping and/or vigorous shaking and water-blasting to remove loose ZC surface contaminants prior to recycling. The steel racks and other scrap metal pieces were cleaned and inspected thoroughly to ensure that no loose ZC contaminants remained on their surfaces prior to removal from the site to the recycling (i.e., smelter) facility. In our estimate, and based upon an engineering judgment, the remaining tightly adhered ZC paint and/or primer coating constituted a very insignificant amount compared to the total mass of the metal, well below the threshold of hazardous waste. Therefore, the steel racks and scrap metal pieces could be handled as normal steel scrap by the smelter.

According to 40 CFR Part 261.6(a)(3)(ii), scrap metal is among the recyclable materials that are not subject to regulation under 40 CFR, Parts 262 through 268; therefore, scrap metal is exempt from RCRA hazardous waste regulation.

Comment 15:

Section 4.5.2.3, page 23, 1st paragraph. This paragraph discusses the 5 loads of waste classified as non-hazardous. We discussed this issue some on the conference call but it is still not clear why the first load of soil from pile 1 was classified and shipped as non-RCRA hazardous when the remaining soil from this pile was considered RCRA hazardous. According to Table 8, chrome, lead and zinc exceeded TTLC limits. TCLP was not performed. Why was a portion of the pile determined to be RCRA hazardous when only TTLC was performed and why only a portion? Only one sample was taken for dirt pile 1. Do the 5 loads of waste actually refer to different piles as implied

during the conference call? The text does not appear to state this. Similar problems with waste characterization appear to exist for dirt piles 5 and 6 and the 3 bins removed 1/10/96 for which lead exceeded TTLC. Please discuss and clarify as necessary. Refer to the tables in the discussion. Also explain why the 3 bins were only analyzed for lead.

Response:

The five bins (i.e., loads) referenced in Section 4.5.2.3 of the CSR were disposed as either RCRA hazardous waste (four loads) or non-RCRA (i.e., California) hazardous waste (one load) at Laidlaw's Class I Landfill. A detailed discussion of this disposal has been provided in the following response, which has been divided into three parts corresponding to the above-mentioned dirt piles, for clarity.

Part One

Dirt Pile 1 was manifested as non-RCRA (i.e., California) hazardous waste due to a communication error, but it was disposed at Laidlaw's Class I Landfill (refer to attached Table A-2). The four soil-filled bins referred to in Section 4.5.2.3 of the CSR (Page 23, Paragraph 1) as being shipped between March 31 and August 17, 1995, are the ones listed on Page 1 of 4 in the revised Table 10 (attached) under Manifested as RCRA Hazardous Waste (Lines 6 through 8) as Dirt Pile 2 (one bin, 15 cy, Part of Dirt Pile 1) and Dirt Pile 3 (three bins, 15 cy each). Dirt Pile 4 was used as bedding for concrete debris disposed as RCRA hazardous waste. This method of disposal is summarized in attached Table A-2.

Part Two

Dirt Pile 5 was characterized using the TCLP method. The analytical results (listed in Table 8 of the CSR) indicated that it did not exceed the federal maximum concentrations for toxicity characteristics; therefore, material from Dirt Pile 5 was used as bedding material for concrete debris disposed as non-RCRA (i.e., California) hazardous waste (Table A-2).

On the basis of TTLC analysis, Dirt Pile 6 was managed as potentially RCRA hazardous waste and used mostly as bedding material during the disposal of 61 loads of RCRA hazardous waste debris. A small portion of this pile (less than 2 cy), however, was used as a thin layer of bedding material in three loads of concrete debris that were manifested as non-RCRA hazardous waste as listed in the revised Table 10 (attached), under Manifested as Non-RCRA (California) Hazardous Waste. This method of disposal is summarized in attached Table A-2.

Part Three

The three bins sampled on January 10, 1996, and removed on February 8 and March 7, 1996, came from the final surface cleaning pile as described in the last sentence of Section 4.5.2.3 of the CSR. Table 8 (Page 5 of 6) lists the maximum results of analyzing three samples collected from this pile. The analytical results of the extract by the TCLP method indicated that none of the federal maximum concentrations for the toxicity characteristics was exceeded; hence, these bins were disposed as non-RCRA (i.e., California) hazardous waste at ECDC Landfill in East Carbon, Utah, as listed in attached Table 10 at the bottom of Page 2 of 4. Table A-2 attached summarizes the above discussion.

We have not been able to determine why the three bin samples were only analyzed for lead by TTLC.

Comment 16: **Section 4.5.2.4, page 23, 2nd paragraph. Please state if the B&J Landfill is licensed to accept asbestos wastes for disposal.**

Response: B&J Landfill is licensed to accept asbestos waste for disposal.

Comment 17: **Section 4.5.2.5, page 23, 1st paragraph. Its not clear what was done with the cylindrical AAST tank and its contents. It was manifested as non-hazardous, yet it contained a waste that would be classified as hazardous due to cadmium levels. It was sent to a TSDF. Please discuss how this tank and its contents were treated and disposed and whether the materials were disposed as a hazardous waste. State the basis for this determination. It appears that the tank contents should have been manifested as a hazardous waste and disposed accordingly.**

Response: The contents of the cylindrical tank were tested, and the analytical results indicated that none of the TTLC/STLC values for metals were exceeded, with the exception of cadmium. The tank and its contents of less than 2 inches of unpumpable viscous liquid were transported to a permitted TSDF under uniform non-RCRA (i.e., California) hazardous waste manifest as an "empty container" according to Title 22 CCR, Section 66261.7(b)(1); therefore, it is not subject to management as hazardous waste under RCRA. The receiving facility, Erickson, Inc., in Richmond, California, is permitted by DTSC to treat empty tanks and containers that contained RCRA and California hazardous waste and turn the salvageable material into reusable products. According to the Erickson facility officials, "all residual product and rinse water generated from the cleaning of this tank at the Erickson facility was also managed [as] hazardous waste as required by Title 22." Also, according to Erickson, liquid wastes were transported with wastes from other tanks, after proper characterization, for offsite disposal, with Erickson as the generator of the waste.

The tank itself was cut up and further managed as scrap metal. A tank destruction certificate has been requested from Erickson.

Comment 18: **Section 4.5.2.6, pages 24-25. This section indicates that the pickling tank sludge was considered non-hazardous based on sampling for lead. Earlier data (EMCON, 1987) indicated that lead was not a problem but that copper, chromium and selenium exceeded standards. Please discuss why copper, chromium and selenium were not analyzed and the basis for classifying this material as non-RCRA hazardous. If not RCRA characteristic, this sludge may qualify as a RCRA listed waste (EPA hazardous waste number K062 - spent pickle liquor generated by steel finishing operations). This is one case in which it may not have been appropriate to characterize the waste as non-RCRA hazardous. Also, please clarify why this paragraph references "both" pickling tanks yet three are mentioned earlier.**

Response:

With regard to the three main points raised in your comment, our response has been divided into three parts. The three parts being:

Part One

Refer to the fourth item of our responses to the General Comments above, which deals with the pickling tank sludge and bricks waste stream.

Part Two

RCRA-listed Waste Code K062 does not apply to the pickling tanks or their contents. According to 40 CFR, Part 261.32, the K062 waste code is for "spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (Standard Industrial Classification [SIC] Codes 331 and 332)." The pickling and plating operations formerly conducted at this yard do not fall under these two codes. These operations more likely fall under SIC Codes 346 (metal stampings) and 347 (coating, engraving, and allied services) which are not under any RCRA-listed waste codes.

Part Three

There is no reference in this section to "both" pickling tanks. Such a reference was made in the second paragraph in relation to the two sludge samples collected from two of the three tanks by EMCON.

Comment 19:

Section 4.6.1, page 27. State what was done with the vault sludge. Provide disposal information. Table 7 has no information on the rinse water. Please discuss the basis for disposal of this water as non-hazardous liquid.

Response:

The final disposition of the containment vault sludge was addressed in the CSR Section 4.5.2.5, Page 24, and discussed in the fourth item of our responses to General Comment which deals with the pickling tank sludge and bricks waste stream. A clarification will be added to Section 4.5.2.7, however, to state the final disposition of this sludge. The information on vault sludge disposal is also listed in Table 10 of the CSR and summarized in Table A-4, attached.

The analytical results of the containment vault rinse water were not provided by PWCSFB's tank removal subcontractor (Zacor) during the preparation of the CSR. Recently, PWCSFB provided the rinse water profile document from the McKittrick Waste Treatment Site (attached) where this water was disposed and treated. This information is included in the revised Table 7, attached, and will be reflected in the text of the Draft Final CSR.

The disposal and treatment of this water was described in the Navy's response to Comment 12 (see also attached Table A-3).

Comment 20:

Section 4.6.2, page 27. The rainwater in the vault had mercury concentrations of 1.1 mg/l which exceeds the table 7 limit as well as the TCLP limit in 40 CFR 261 and 268. The statement in this paragraph that the concentrations were below regulatory values is incorrect. Please provide justification why this material was not handled as a hazardous waste.

Please correct typographical error at the end of 4.6.2 regarding discharge of rainwater. Per our discussion during the conference call, the Navy indicated that the rainwater was discharged to the sanitary sewer and not the storm sewer.

Response: After reviewing the sample analytical results included in Appendix F (not in Appendix E as per CSR text) regarding the rainwater accumulated in the secondary containment vault (20,000 gallons), a typographical error was discovered in the reported value in Table 7 under Discharge Permit #5. The result for zinc should be 1.1 mg/L. The result for mercury should be "not detected" (ND). Other Title 22 metals not listed in Table 7 were also not detected. The analytical results for zinc and mercury do not exceed the Table 7 (City of San Francisco) discharge limits or the TCLP limits. Consequently, the material was not handled as hazardous waste and was appropriately discharged to the sanitary sewer.

The typographical error at the end of Section 4.6.2 will be corrected. The word "storm" will be replaced by "sanitary."

Comment 21: Table 4, Ambient Air Monitoring Results, Total Particulates and Metals, Pages 25 through 28 of 58. Data was printed in incorrect columns. For example, Q-0858 is not an airborne arsenic concentration. Re-print pages as necessary.

Response: Table 4, Pages 25 through 28 of 58, has been corrected and is attached.

Comment 22: Table 4, Ambient Air Monitoring Results, Total Particulates and Metals, Pages 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, and 58. Table presents total hexavalent chromium (μg) detected on filter, but corresponding airborne concentrations ($\mu\text{g}/\text{m}^3$) not presented on sheet.

Further, some airborne hexavalent chromium concentrations ($\mu\text{g}/\text{m}^3$) are presented without any corresponding total hexavalent chromium (μg) detected on the filter. Re-print pages with correct data.

Response: Total hexavalent chromium concentrations will be presented in the Draft Final CSR, Table 4, Pages 34, 36, 38, 40, 42, 46, 50, 52, 54, and 58 of 58, and missing total hexavalent chromium and airborne hexavalent chromium concentrations have been added. The revised Table 4 is attached.

Comment 23: Table 4, Ambient Air Monitoring Results, Total Particulates and Metals, Pages 36, 40, 42, 44, 46, and 50. Table presents airborne hexavalent chromium concentrations ($\mu\text{g}/\text{m}^3$) for non detected values of corresponding total hexavalent chromium (μg) on the filter. Re-print pages with correct data.

Response: Airborne hexavalent chromium concentrations for nondetected total hexavalent chromium have been corrected and are included in attached Table 4, Pages 36, 38, 40, 42, 44, 46, and 50 of 58.

Comment 24: Table 4, Ambient Air Monitoring Results, Total Particulates and Metals, Page 58. Table does not present mean concentrations ($\mu\text{g}/\text{m}^3$) or standard deviations for airborne hexavalent chromium. After errors have been corrected, re-print page with correct data.

Response: The mean concentrations and standard deviations for airborne hexavalent chromium were computed as presented in Table 4, attached.

Comment 25: Table 4 and Section 4.2.5, Results. After the above changes have been performed, data should be reviewed to determine if any concentrations exceeded the revised action levels, and discussed in the text as necessary.

Response: The revised Table 4 data were reviewed to determine whether any concentrations exceeded the revised action levels. The revised data indicate that none of the concentrations exceed the action levels.

Comment 26: Table 8. Please check the limits for total chrome and chrome VI. The limit for chrome VI is shown as greater than for total chrome.

Response: Because of a typographical error, the limits of these two analyses are listed in reverse order. The limits were corrected, as shown in the attached Table 8.

Errata: In Table 9, Page 1 of 2, the reported TCLP method concentrations for the cylindrical AAST liquid should be deleted. No TCLP was run on this liquid. The revised Table 9 is attached.

Attachments:

Table A-1	Summary of Concrete Debris Disposal
Table A-2	Summary of Soil and General Solid Debris Disposal
Table A-3	Summary of Liquid Waste Disposal
Table A-4	Summary of Sludge Waste Disposal
Table 2	Ambient Air Monitoring Results, Background, Total Particulates and Metals
Table 4	Ambient Air Monitoring Results, Total Particulates and Metals
Table 7	Analytical Data Summary for Water Generated During Removal Activity
Table 8	Analytical Data Summary for Solids Sampled During Removal Activity
Table 9	Analytical Data Summary for Liquid Waste Sampled During Removal Activity
Table 10	Summary of Waste Tracking
McKittrick Waste Treatment Site, Generator's Waste Profile	

**Table A-1. Summary of Concrete Debris Disposal
Navy Responses to EPA Comments on the Draft CSR
Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

EPA Comment No.	Waste Type and Source	Verified Quantity	Analysis Methods	Waste Designation	Manifest	Disposal Facility	Treatment Method
5	Concrete debris generated during the removal action:						
	• Visibly contaminated (64 loads)	1152 CY	TCLP (metals)	RCRA Hazardous Waste ^a	Various ^c	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	• Least or non-visibly contaminated (5 loads)	90 CY	TTLCTCLP (metals)	Non-RCRA (California) Hazardous Waste ^b	95458868 95458869 95458870 95883333 95883334	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling
7, 8, & 9	Concrete debris of:						
	• Building 423 foundation	NA	TCLP	RCRA Hazardous Waste	Various ^c	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	• Building 422 foundation & block	NA	TCLP	RCRA Hazardous Waste	Various ^c	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	• 5,000-gal rectangular AAST concrete foundation (mixed with other solid waste)	54 CY	TCLP	RCRA Hazardous Waste ^a	9588450 95883451 95883452	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
13	Concrete debris generated during the removal action (5 loads) with bedding soil from Dirt Pile 5 (2 loads) and Dirt Pile 6 (3 loads)	90 CY	TTLCTCLP (metals)	Non-RCRA (California) Hazardous Waste ^b	95458868 95458869 95458870 95883333 95883334	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling

Notes:

- a. Based on concrete core samples collected on 8/15/95 and visual screening in the field.
- b. Based on concrete core samples collected on 9/13/95.
- c. Manifest Numbers: 95458833; 95458834; 95458835; 95458836; 95883322; 95883324; 95883325; 95458837; 95458838; 95458839; 95458840; 95883330; 95883321; 95883306; 95883307; 95883308; 95883309; 95883310; 95883311; 95883312; 95883313; 95883314; 95883315; 95883316; 95883317; 95883326; 95883327; 95883328; 95883329; 95883364; 95883365; 95883366; 95883367; 95883368; 95883369; 95883370; 95883371; 95883372; 95883373; 95883374; 95883375; 95883378; 95883379; 95883380; 95883381; 95883382; 95883383; 95883384; 95883385; 95883386; 95883441; 95883442; 95883443; 95883444; 95883445; 95883446; 95883447; 95883448; 95883449; 95883453; 95883455; 95883456; 95883451; 95883452.

**Table A-2. Summary of Soil and General Solid Debris Disposal
Navy Responses to EPA Comments on the Draft CSR
Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

EPA Comment No.	Waste Type and Source	Verified Quantity	Analysis Methods	Waste Designation	Manifest	Disposal Facility	Treatment Method
6	Zinc chromate (ZC) residue (chips) removed from steel racks by water blasting	Unknown	TTLCTCLP (metals)	RCRA Hazardous ^a Waste	95883450 through 3452	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
10	Wooden debris (6 Bins) with trash and glass from inside Exclusion Zone (EZ)	105 CY	Not Analyzed	RCRA Hazardous Waste ^b	95458812 through 8816	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
15	<u>Part One of Comment 15:</u>						
	• Dirt Pile 1 (1 Bin) from northeastern quadrant of EZ	18 CY	TTLCTCLP (metals)	Non-RCRA (California) Hazardous Waste	93752716	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling
	• Dirt Pile 2 (1 Bin) from northeastern quadrant (part of Dirt Pile 1)	15 CY	TTLCTCLP (metals)	RCRA Hazardous Waste	93752786	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	• Dirt Pile 3 (3 Bins) from northeastern quadrant	45 CY	TCLP (metals)	RCRA Hazardous Waste	95458810 95458811	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	• Dirt Pile 4 from southwestern quadrant of EZ used as bedding for 38 loads of concrete debris	66 CY	TCLP (metals)	RCRA Hazardous Waste	Various ^c	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	<u>Part Two of Comment 15:</u>						
	• Dirt Pile 5 from northeastern quadrant of EZ used as bedding for 2 loads of concrete debris	10 CY	TCLP (metals) and TRPH	Non-RCRA (California) Hazardous Waste	95458868 95458869	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling
	• Dirt Pile 6 from southwestern quadrant of EZ used as:	50 CY (total)	TTLCTCLP (metals)				
	1. Bedding for 3 loads of concrete debris	2 CY (estimate)		Non-RCRA (California) Hazardous Waste	95458870 95883333 95883334	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling
	2. Bedding for 61 loads of concrete debris	48 CY (estimate)		RCRA Hazardous Waste	Various ^d	Laidlaw Class I Landfill @ Buttonwillow, CA	Stabilization
	<u>Part Three of Comment 15:</u>						
	• Dirt Pile generated from final surface cleaning (3 bins)	60 CY	TCLP (metals) TTLCTCLP (lead)	Non-RCRA (California) Hazardous Waste	95832739 95832740 95832742	ECDC Landfill @ East Carbon, Utah	Direct Landfilling

**Table A-2. Summary of Soil and General Solid Debris Disposal
Navy Responses to EPA Comments on the Draft CSR
Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

EPA Comment No.	Waste Type and Source	Verified Quantity	Analysis Methods	Waste Designation	Manifest	Disposal Facility	Treatment Method
17	Cylindrical AAST metal	25,000 lb.	NA	Non-RCRA (California) Hazardous Waste	95592726	Erickson @ Richmond, CA	Decontaminated and Salvaged

Notes:

- a. ZC residue was removed from the lined catch basins and disposed with other Zinc Chromate Control Area (ZCCA) solid debris piles that were shipped as RCRA hazardous waste on 11/17/95.
- b. Designated as RCRA hazardous waste without characterization due to time and budget constraints.
- c. All of Dirt Pile 4 soil was used as bedding material during concrete debris transportation (Table A-1).
- d. Refer to Table A-1 for manifest numbers of first 61 loads.

**Table A-3. Summary of Liquid Waste Disposal
Navy Responses to EPA Comments on the Draft CSR
Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

EPA Comment No.	Waste Type and Source	Verified Quantity	Analysis Methods	Waste Designation	Manifest	Disposal Facility	Treatment Method
6	Water generated during steel racks water-blasting operation	150-gal. ^a (estimate)	Not analyzed ^b	Non-Hazardous	NH-N2171	Class II TSDF @ McKittrick, CA	Solid/Liquid Separation ^c
9	Rinse water generated during rectangular (5,000-gallon) AAST decontamination	50-gal. ^a (estimate)	Not analyzed ^b	Non-Hazardous	NH-N2171	Class II TSDF @ McKittrick, CA	Solid/Liquid Separation ^c
12	Rinse water generated during containment vault, pickling tanks, and rectangular AAST decontamination	850-gal. ^a (estimate)	Not analyzed ^b	Non-Hazardous	NH-N2171	Class II TSDF @ McKittrick, CA	Solid/Liquid Separation ^c
17	Cylindrical AAST Contents ^d	NA	STLC (metals)	Non-RCRA (California) Hazardous Waste	95592726 ^e	Erickson @ Richmond, CA	... ^f

Notes:

- a. Part of 1,000 gallons of rinse water generated from various decontamination operations (i.e., steel racks, containment vaults, pickling tanks, and rectangular AAST).
- b. No sample was collected prior to disposal.
- c. McKittrick disposes of precipitating solids at an on-site double-lined landfill after water is evaporated in a triple-lined evaporation pond.
- d. The tank contained less than 2 inches of viscous liquid residual when transported to the TSDF.
- e. AAST manifest number.
- f. Erickson disposes of liquid hazardous waste streams offsite after proper characterization and according to analytical results.

**Table A-4 Summary of Sludge Waste Disposal
Navy Responses to EPA Comments on the Draft CSR
Pickling and Plate Yard Removal Action
Hunters Point Shipyard**

EPA Comment No.	Waste Type and Source	Estimated Quantity	Analysis Methods	Waste Designation	Manifest	Disposal Facility	Treatment Method
18	Pickling Tank Sludge and Brick Debris	1.5 Cy ^a and 322 Cy ^b , respectively	TCLP (lead only)	Non-RCRA (California) Hazardous Waste	93019103 93752772 95458879 95458880 95458881 05458882 95458883 05458885 95458886 95458887 95458888 95458890 05458891	Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling
19	Containment Vault Sludge	0.5 Cy ^b	TTLIC (metals)	Non-RCRA (California) Hazardous Waste		Laidlaw Class I Landfill @ Buttonwillow, CA	Direct Landfilling

Notes:

- a. The sludge in each of the three pickling tanks dried to a thickness of less than 1 inch prior to removal of pickling tanks.
- b. Pickling tank sludge and bricks were inevitably mixed with secondary containment vault sludge. The total volume of these three waste streams is = 234 CY (approximately).
- c. Refer to manifest numbers above.

**Table 2. Ambient Air Monitoring Results - Background, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling End Date	Mass of Particulates on filter (µg)	Sample Run Time (min)	Total Air Volume Thru Filter (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-4228	Station 1	09/16/94	79400.	1440	1631	48.67	48.37	0.030	99.24	0.061	0.8696	0.0005
Q-4229	Station 2	09/16/94	69100.	1425	1614	42.81	45.36	0.028	85.96	0.053	0.8897	0.0006
Q-4230	Station 1	09/17/94	63300.	1440	1631	38.81	42.10	0.026	118.8	0.073	0.6516	0.0004
Q-4231	Station 2	09/17/94	50800.	1425	1614	31.47	45.86	0.028	98.24	0.061	0.4862	0.0003
Q-4232	Station 1	09/20/94	71600.	1430	1620	44.20	26.31	0.016	143.9	0.089	0.7042	0.0004
Q-4239	Station 2	09/20/94	53100.	1427	1617	32.85	35.59	0.022	72.68	0.045	0.6466	0.0004
Q-4233	Station 1	09/21/94	83000.	1443	1635	50.78	31.58	0.019	147.1	0.090	1.028	0.0006
Q-4234	Station 2	09/21/94	75100.	1438	1629	46.10	27.07	0.017	107.3	0.066	0.817	0.0005
Mean Concentration:						41.96	--	0.023	--	0.067	--	0.0005
Standard Deviation:						7.06	--	0.005	--	0.016	--	0.0001

**Table 2. Ambient Air Monitoring Results - Background, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling End Date	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Hexavalent Chromium on filter (µg)	Hexavalent Chromium Concentration (µg/m³)
Q-4228	Station 1	09/16/94	1.13	0.00069	40.6	0.025	14.69	0.0090	ND	--
Q-4229	Station 2	09/16/94	0.6341	0.00039	38.85	0.024	14.34	0.0089	ND	--
Q-4230	Station 1	09/17/94	0.391	0.00024	29.57	0.018	8.446	0.0052	ND	--
Q-4231	Station 2	09/17/94	0.396	0.00025	24.28	0.015	8.145	0.0050	ND	--
Q-4232	Station 1	09/20/94	0.4912	0.00030	32.83	0.020	8.621	0.0053	ND	--
Q-4239	Station 2	09/20/94	0.3007	0.00019	31.33	0.019	7.719	0.0048	ND	--
Q-4233	Station 1	09/21/94	0.6591	0.00040	44.36	0.027	10.6	0.0065	ND	--
Q-4234	Station 2	09/21/94	0.4411	0.00027	47.62	0.029	9.799	0.0060	ND	--
Mean Concentration:			--	0.00034	--	0.022	--	0.0063	--	--
Standard Deviation:			--	0.00016	--	0.005	--	0.0017	--	--

ND: Not detected.

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
610096	Station 1	12/28-29/94	/a/	1420	1711	/a/	47.30	0.028	65.16	0.038	0.77	0.0004
610095	Station 2	12/28-29/94	/a/	1430	1723	/a/	45.74	0.027	191.7	0.111	2.20	0.0013
6208399	Station 3	12/28-29/94	/a/	1440	1735	/a/	46.36	0.027	70.80	0.041	0.86	0.0005
6208398	Station 4	12/28-29/94	/a/	1450	1747	/a/	37.91	0.022	67.35	0.039	1.29	0.0007
6208396	Station 1	12/29-30/94	/a/	1430	1726	/a/	30.39	0.018	57.64	0.033	1.15	0.0007
6208397	Station 2	12/29-30/94	/a/	1420	1714	/a/	13.16	0.008	40.41	0.024	ND	--
5933207	Station 3	12/29-30/94	/a/	1430	1726	/a/	50.44	0.029	80.20	0.046	1.00	0.0006
5933208	Station 4	12/29-30/94	/a/	1430	1726	/a/	88.66	0.051	131.3	0.076	1.76	0.0010
Q-4516	Station 1	12/30/94	14200	335	404	35.18	19.05	0.047	13.78	0.034	0.25	0.0006
--/a/	Station 2	12/30/94	--	--	--	--						
Q-4518	Station 3	12/30/94	16200	320	386	42.02						
Q-4519	Station 4	12/30/94	16500	310	374	44.17	20.55	0.055	26.82	0.072	0.64	0.0017
Q-4520	Station 1	1/3-4/95	23600	1410	1689	13.97	8.15	0.005	3.13	0.002	0.37	0.0002
Q-4517	Station 2	1/3-4/95	49300	1410	1689	29.19	11.90	0.007	199.9	0.118	3.63	0.0022
Q-4521	Station 3	1/3-4/95	31400	1410	1689	18.59						
--/b/	Station 4	1/3-4/95	--									
Q-4522	Station 1	1/4-5/95	24000	1435	1712	14.02	9.09	0.005	31.01	0.018	0.60	0.0004
Q-4523	Station 2	1/4-5/95	45800	1465	1748	26.20	14.72	0.008	115.3	0.066	1.82	0.0010
Q-4524	Station 3	1/4-5/95	35700	1470	1754	20.35						
--/b/	Station 4	1/4-5/95										
Q-4525/c/	Station 1	1/5/95	7200	390	465	15.47						
Q-4526/c/	Station 2	1/5/95	24800	370	441	56.18						
Q-4527/c/	Station 3	1/5/95	19100	355	424	45.09						
--/b/	Station 4	1/5/95										
--	--	1/6/95	No sampling. Scheduled day off for contractor.									
Q-4528	Station 1	1/9-10/95	57100	1410	1686	33.88	6.27	0.004	74.56	0.044	ND	--
Q-4529	Station 2	1/9-10/95	50400	1440	1721	29.28						
Q-4530	Station 3	1/9-10/95	44100	1445	1727	25.53						
Q-4531	Station 4	1/9-10/95	55100	1450	1733	31.79	4.07	0.002	38.22	0.022	0.43	0.0002

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
610096	Station 1	12/28-29	0.34	0.0002	18.98	0.011	6.02	0.004	8.15	0.005	ND	--
610095	Station 2	12/28-29	1.14	0.0007	36.03	0.021	12.53	0.007	23.18	0.013	ND	--
6208399	Station 3	12/28-29	0.40	0.0002	18.80	0.011	6.64	0.004	8.46	0.005	ND	--
6208398	Station 4	12/28-29	0.40	0.0002	21.74	0.012	7.58	0.004	9.09	0.005	ND	--
6208396	Station 1	12/29-30	0.49	0.0003	27.98	0.016	4.17	0.002	5.95	0.003	ND	--
6208397	Station 2	12/29-30	0.42	0.0002	8.08	0.005	1.43	0.001	5.95	0.003	ND	--
5933207	Station 3	12/29-30	0.50	0.0003	29.07	0.017	4.10	0.002	9.09	0.005	ND	--
5933208	Station 4	12/29-30	0.59	0.0003	38.85	0.023	6.77	0.004	117.2	0.068	ND	--
Q-4516	Station 1	12/30/94	0.15	0.0004	5.66	0.014	1.44	0.004	ND (2.506)	--	ND (0.9398)	--
--/a/	Station 2	12/30/94										
Q-4518	Station 3	12/30/94										
Q-4519	Station 4	12/30/94	0.32	0.0008	12.43	0.033	1.82	0.005	5.51	0.015	ND (0.9398)	--
Q-4520	Station 1	1/3-4/95	0.32	0.0002	20.52	0.012	1.80	0.001	19.74	0.012	2.51	0.0015
Q-4517	Station 2	1/3-4/95	0.95	0.0006	81.76	0.048	11.94	0.007	22.24	0.013	2.19	0.0013
Q-4521	Station 3	1/3-4/95										
--/b/	Station 4	1/3-4/95										
Q-4522	Station 1	1/4-5/95	1.15	0.0007	15.32	0.009	2.50	0.001	4.70	0.003	ND	--
Q-4523	Station 2	1/4-5/95	1.00	0.0006	25.88	0.015	6.89	0.004	14.41	0.008	ND	--
Q-4524	Station 3	1/4-5/95										
--/b/	Station 4	1/4-5/95										
Q-4525/c/	Station 1	1/5/95										
Q-4526/c/	Station 2	1/5/95										
Q-4527/c/	Station 3	1/5/95										
--/b/	Station 4	1/5/95										
--	--	1/6/95	No sampling. Scheduled day off for contractor.									
Q-4528	Station 1	1/9-10/95	1.60	0.0009	64.22	0.038	4.04	0.002	4.70	0.003	ND	--
Q-4529	Station 2	1/9-10/95										
Q-4530	Station 3	1/9-10/95										
Q-4531	Station 4	1/9-10/95	0.67	0.0004	19.33	0.011	5.39	0.003	7.21	0.004	4.39	0.0025

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
--	--	1/10-11/95	No sampling. No demolition work performed 1/10/95.									
Q-4533/c/	Station 1	1/11-12/95	40100	1425	1700	23.59						
Q-4534/c/	Station 2	1/11-12/95	48300	1450	1730	27.92						
Q-4535/c/	Station 3	1/11-12/95	31300	1445	1724	18.15						
Q-4536/c/	Station 4	1/11-12/95	42200	1445	1724	24.48						
--	--	1/12-13/95	No sampling. Limited dust-generating work performed on 1/12/95.									
Q-4537	Station 1	1/13/95	7000	385	460	15.21	4.39	0.010	5.95	0.013	ND	--
Q-4538	Station 2	1/13/95	6100	375	448	13.61						
Q-4539	Station 3	1/13/95	7400	370	442	16.73	ND	--	9.40	0.021	ND	--
Q-4540	Station 4	1/13/95	4800	370	442	10.85						
--	--	1/16-17/95	No sampling. Holiday on 1/16/95.									
Q-4541/c/	Station 1	1/17-18/95	55500	1440	1721	32.24						
Q-4542/c/	Station 2	1/17-18/95	72000	1450	1733	41.54						
Q-4543/c/	Station 3	1/17-18/95	52500	1460	1745	30.08						
Q-4544/c/	Station 4	1/17-18/95	69600	1460	1745	39.88						
Q-4545	Station 1	1/18-19/95	33800	1435	1715	19.70	20.36	0.012	52.94	0.031	0.42	0.0002
Q-4546	Station 2	1/18-19/95	90800	1440	1721	52.75	57.64	0.033	246.9	0.143	1.83	0.0011
Q-4547	Station 3	1/18-19/95	44600	1440	1721	25.91						
Q-4548	Station 4	1/18-19/95	91000	1445	1727	52.68	40.10	0.023	113.7	0.066	1.75	0.0010
Q-4549/c/	Station 1	1/19/95	17300	420	502	34.46						
Q-4558/c/	Station 2	1/19/95	27800	360	430	64.60						
Q-4559/c/	Station 3	1/19/95	22300	340	406	54.86						
Q-4560/c/	Station 4	1/19/95	26500	330	394	67.17						
--	--	1/19-20/95	No sampling. Scheduled day off for contractor.									
Q-4561	Station 1	1/23-24/95	20300	1440	1721	11.79	5.95	0.003	29.45	0.017	ND	--
Q-4562	Station 2	1/23-24/95	41900	1440	1721	24.34	10.65	0.006	103.70	0.060	0.34	0.0002
Q-4563	Station 3	1/23-24/95	13600	1445	1727	7.87						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
--	--	1/10-11/95	No sampling. No demolition work performed 1/10/95.									
Q-4533/c/	Station 1	1/11-12/95										
Q-4534/c/	Station 2	1/11-12/95										
Q-4535/c/	Station 3	1/11-12/95										
Q-4536/c/	Station 4	1/11-12/95										
--	--	1/12-13/95	No sampling. Limited dust-generating work performed on 1/12/95.									
Q-4537	Station 1	1/13/95	0.06	0.0001	1.70	0.004	1.15	0.003	ND	--	ND	--
Q-4538	Station 2	1/13/95										
Q-4539	Station 3	1/13/95	0.04	0.0001	1.22	0.003	1.52	0.003	ND	--	1.75	0.0040
Q-4540	Station 4	1/13/95										
--	--	1/16-17/95	No sampling. Holiday on 1/16/95.									
Q-4541/c/	Station 1	1/17-18/95										
Q-4542/c/	Station 2	1/17-18/95										
Q-4543/c/	Station 3	1/17-18/95										
Q-4544/c/	Station 4	1/17-18/95										
Q-4545	Station 1	1/18-19/95	0.59	0.0003	28.70	0.017	5.55	0.003	6.27	0.004	ND	--
Q-4546	Station 2	1/18-19/95	6.64	0.0039	119.0	0.069	32.58	0.019	27.88	0.016	ND	--
Q-4547	Station 3	1/18-19/95										
Q-4548	Station 4	1/18-19/95	1.41	0.0008	62.03	0.036	28.35	0.016	26.63	0.015	ND	--
Q-4549/c/	Station 1	1/19/95										
Q-4558/c/	Station 2	1/19/95										
Q-4559/c/	Station 3	1/19/95										
Q-4560/c/	Station 4	1/19/95										
--	--	1/19-20/95	No sampling. Scheduled day off for contractor.									
Q-4561	Station 1	1/23-24/95	0.43	0.0002	11.53	0.007	5.01	0.003	5.01	0.003	ND	--
Q-4562	Station 2	1/23-24/95	3.08	0.0018	25.50	0.015	10.49	0.006	8.46	0.005	ND	--
Q-4563	Station 3	1/23-24/95										

**Table 4. Ambient Air Monitoring results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-4564	Station 4	1/23-24/95	26300	1440	1721	15.25						
--	--	1/23-24/95	No sampling. No demolition work performed 1/24/95.									
Q-4565	Station 1	1/25-26/95	29200	1475	1763	16.56	19.55	0.011	43.36	0.025	0.43	0.0002
Q-4566	Station 2	1/25-26/95	55100	1595	1907	28.90	29.32	0.015	112.50	0.059	2.61	0.0014
Q-4567	Station 3	1/25-26/95	36700	1605	1919	19.13						
Q-4568	Station 4	1/25-26/95	38500	1610	1925	20.00						
--	--	1/26-27/95	No sampling. No dust generating work performed on 1/26/95.									
--	--	1/27/95	No sampling. No demolition work performed 1/27/95.									
Q-4569	Station 1	1/30-31/95	41000	1440	1721	23.82	29.57	0.017	99.75	0.058	0.74	0.0004
Q-4571	Station 2	1/30-31/95	69600	1405	1680	41.44						
Q-4570	Station 3	1/30-31/95	59300	1440	1721	34.45	35.84	0.021	129.30	0.075	1.09	0.0006
Q-4572	Station 4	1/30-31/95	67700	1360	1626	41.64						
--	--	1/31-2/1/95	No sampling. No demolition work performed 1/31/95.									
--	--	2/1-2/95	No sampling. No demolition work performed 2/1/95.									
Q-4573	Station 1	2/2-3/95	16700	405	474	35.20	5.01	0.011	20.99	0.044	ND	--
Q-5165	Station 2	2/2-3/95	48400	1475	1174	41.23						
Q-5166	Station 3	2/2-3/95	78000	1470	1722	45.30						
Q-5167	Station 4	2/2-3/95	90400	1460	2073	43.61	48.87	0.024	152.60	0.074	1.52	0.0007
--	--	2/3/95	No sampling. Scheduled day off for contractor.									
Q-5168	Station 1	2/6-7/95	51700	1185	1545	33.46	23.18	0.015	55.14	0.036	0.34	0.0002
Q-5169	Station 2	2/6-7/95	107900	1440	1176	91.77						
Q-5170	Station 3	2/6-7/95	83200	1445	1762	47.22						
Q-5171	Station 4	2/6-7/95	143200	1460	1618	88.51	50.75	0.031	189.20	0.117	1.65	0.0010
Q-5172/c/	Station 1	2/7-8/95	110300	1450	2091	52.76						
Q-5173/c/	Station 2	2/7-8/95	66300	1435	1138	58.27						
Q-5174/c/	Station 3	2/7-8/95	95300	1430	1745	54.62						
Q-5175/c/	Station 4	2/7-8/95	83700	1430	1586	52.79						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-4564	Station 4	1/23-24/95										
--	--	1/23-24/95	No sampling. No demolition work performed 1/24/95.									
Q-4565	Station 1	1/25-26/95	5.56	0.0032	30.32	0.017	18.35	0.010	11.28	0.006	ND	--
Q-4566	Station 2	1/25-26/95	7.95	0.0042	45.61	0.024	30.07	0.016	26.06	0.014	ND	--
Q-4567	Station 3	1/25-26/95										
Q-4568	Station 4	1/25-26/95										
--	--	1/26-27/95	No sampling. No dust generating work performed on 1/26/95.									
--	--	1/27/95	No sampling. No demolition work performed 1/27/95.									
Q-4569	Station 1	1/30-31/95	3.31	0.0019	79.95	0.046	27.82	0.016	6.02	0.003	ND	--
Q-4571	Station 2	1/30-31/95										
Q-4570	Station 3	1/30-31/95	3.91	0.0023	122.60	0.071	30.07	0.017	9.02	0.005	ND	--
Q-4572	Station 4	1/30-31/95										
--	--	1/31-2/1/95	No sampling. No demolition work performed 1/31/95.									
--	--	2/1-2/95	No sampling. No demolition work performed 2/1/95.									
Q-4573	Station 1	2/2-3/95	0.15	0.0003	5.20	0.011	1.61	0.003	ND	--	ND	--
Q-5165	Station 2	2/2-3/95										
Q-5166	Station 3	2/2-3/95										
Q-5167	Station 4	2/2-3/95	2.51	0.0012	61.71	0.030	22.49	0.011	41.98	0.020	ND	--
--	--	2/3/95	No sampling. Scheduled day off for contractor.									
Q-5168	Station 1	2/6-7/95	0.49	0.0003	21.87	0.014	11.50	0.007	4.70	0.003	ND	--
Q-5169	Station 2	2/6-7/95										
Q-5170	Station 3	2/6-7/95										
Q-5171	Station 4	2/6-7/95	1.51	0.0009	80.51	0.050	21.15	0.013	18.17	0.011	ND	--
Q-5172 /cl	Station 1	2/7-8/95										
Q-5173 /cl	Station 2	2/7-8/95										
Q-5174 /cl	Station 3	2/7-8/95										
Q-5175 /cl	Station 4	2/7-8/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-5176	Station 1	2/8-9/95	77900	1630	2433	32.02	42.92	0.018	161.60	0.066	1.68	0.0007
Q-5177	Station 2	2/8-9/95	84800	1620	2062	41.12						
Q-5178	Station 3	2/8-9/95	89300	1605	2035	43.88	46.36	0.023	166.30	0.082	1.86	0.0009
Q-5179	Station 4	2/8-9/95	77800	1600	1770	43.96						
--	--	2/9-10/95	No sampling. No dust generating work performed on 2/9/95.									
--	--	2/10/95	No sampling. No dust generating work performed on 2/10/95.									
--	--	2/13-14/95	No sampling. No demolition work performed 2/13/95.									
--	--	2/14-15/95	No sampling. No demolition work performed 2/14/95.									
--	--	2/15-16/95	No sampling. No demolition work performed 2/15/95.									
Q-5180	Station 1	2/16/95	35700	365	533	67.01						
Q-5181	Station 2	2/16/95	30100	355	288	104.46						
Q-5182	Station 3	2/16/95	84500	340	412	205.02	33.83	0.082	250.60	0.608	1.01	0.0025
Q-5183	Station 4	2/16/95	27500	340	367	74.83	15.29	0.042	57.14	0.155	0.45	0.0012
--	--	2/17/95	No sampling. Scheduled day off for contractor.									
--	--	2/20-21/95	No sampling. Holiday on 2/20/95.									
Q-5184/c/	Station 1	2/21-22/95	80200	1450	2053	39.06						
Q-5185/c/	Station 2	2/21-22/95	104200	1485	1215	85.78						
Q-5186/c/	Station 3	2/21-22/95	27300	1490	1820	15.00						
Q-5187/c/	Station 4	2/21-22/95	69000	1490	1623	42.51						
Q-5188	Station 1	2/22-23/95	31800	1440	1718	18.51	8.77	0.005	49.62	0.029	0.39	0.0002
Q-5189	Station 2	2/22-23/95	99500	1430	1166	85.31	42.10	0.036	330.80	0.284	3.11	0.0027
--	Station 3	/b/	--	--	--	--						
Q-5190	Station 4	2/22-23/95	69800	1420	1513	46.14						
Q-5191	Station 1	2/23-24/95	77900	1470	2075	37.54						
Q-5192	Station 2	2/23-24/95	121700	1450	1112	109.40	45.11	0.041	523.80	0.471	4.96	0.0045
--	Station 3	/b/	--	--	--	--						
Q-5193	Station 4	2/23-24/95	63500	1445	1569	40.47	15.04	0.010	84.21	0.054	0.98	0.0006
--	--	2/24/95	No sampling. No demolition work performed 2/24/95.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-5176	Station 1	2/8-9/95	0.62	0.0003	42.92	0.018	14.41	0.006	13.16	0.005	ND	--
Q-5177	Station 2	2/8-9/95										
Q-5178	Station 3	2/8-9/95	0.57	0.0003	50.12	0.025	16.07	0.008	15.04	0.007	ND	--
Q-5179	Station 4	2/8-9/95										
--	--	2/9-10/95	No sampling. No dust generating work performed on 2/9/95.									
--	--	2/10/95	No sampling. No dust generating work performed on 2/10/95.									
--	--	2/13-14/95	No sampling. No demolition work performed 2/13/95.									
--	--	2/14-15/95	No sampling. No demolition work performed 2/14/95.									
--	--	2/15-16/95	No sampling. No demolition work performed 2/15/95.									
Q-5180	Station 1	2/16/95										
Q-5181	Station 2	2/16/95										
Q-5182	Station 3	2/16/95	0.60	0.0014	129.30	0.314	11.68	0.028	40.60	0.099	ND	--
Q-5183	Station 4	2/16/95	0.23	0.0006	15.96	0.043	4.01	0.011	5.51	0.015	ND	--
--	--	2/17/95	No sampling. Scheduled day off for contractor.									
--	--	2/20-21/95	No sampling. Holiday on 2/20/95.									
Q-5184 /c/	Station 1	2/21-22/95										
Q-5185 /c/	Station 2	2/21-22/95										
Q-5186 /c/	Station 3	2/21-22/95										
Q-5187 /c/	Station 4	2/21-22/95										
Q-5188	Station 1	2/22-23/95	4.19	0.0024	14.36	0.008	25.56	0.015	10.78	0.006	ND	--
Q-5189	Station 2	2/22-23/95	6.07	0.0052	40.60	0.035	21.13	0.018	33.33	0.029	ND	--
--	Station 3	/b/										
Q-5190	Station 4	2/22-23/95										
Q-5191	Station 1	2/23-24/95										
Q-5192	Station 2	2/23-24/95	3.76	0.0034	65.66	0.059	18.92	0.017	31.83	0.029	ND	--
--	Station 3	/b/										
Q-5193	Station 4	2/23-24/95	1.32	0.0008	28.57	0.018	21.60	0.014	9.52	0.006	ND	--
--	--	2/24/95	No sampling. No demolition work performed 2/24/95.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-5194	Station 1	2/27-28/95	90300	1445	2202	41.01						
Q-5195	Station 2	2/27-28/95	68600	1455	1329	51.60	29.82	0.022	263.10	0.198	0.97	0.0007
Q-5198	Station 3	2/27-28/95	91600	1455	1576	58.12						
Q-5199	Station 4	2/27-28/95	97400	1450	1577	61.75	43.86	0.028	105.00	0.067	1.49	0.0009
--	--	2/28-3/1/95	No sampling. Limited dust-generating work performed on 2/28/95.									
Q-5200	Station 1	3/1-2/95	81600	1670	2416	33.78	38.34	0.016	97.99	0.041	1.45	0.0006
Q-0001	Station 2	3/1-2/95	52900	1640	1344	39.35						
Q-0003	Station 3	3/1-2/95	65800	1540	1785	36.86						
Q-0002	Station 4	3/1-2/95	66900	1625	1774	37.72	37.34	0.021	76.94	0.043	1.57	0.0009
--	--	3/2-3/95	Previous sampling period extended to cover work during morning of 3/2/95.									
--	--	3/3/95	No sampling. Scheduled day off for contractor.									
Q-5196/c/	Station 1	3/6-7/95	63500	1435	1838	34.55						
Q-5197/c/	Station 2	3/6-7/95	59100	1440	1245	47.46						
--	Station 3	/b/	--	--	--	--						
Q-0040/c/	Station 4	3/6-7/95	63800	1445	1940	32.88						
Q-0041	Station 1	3/7-8/95	85700	1455	1871	45.81	25.06	0.013	103.80	0.055	0.87	0.0005
Q-0042	Station 2	3/7-8/95	53400	1455	1390	38.42	14.54	0.010	93.48	0.067	0.56	0.0004
Q-0043	Station 3	3/7-8/95	84000	1445	1740	48.27						
Q-0044	Station 4	3/7-8/95	81700	1435	1971	41.45						
--	--	3/8-9/95	No sampling. Limited dust-generating work performed on 3/8/95.									
--	--	3/9-10/95	No sampling. No demolition work performed 3/9/95.									
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.									
--	--	3/13-14/95	No sampling. Limited dust-generating work performed on 3/13/95.									
Q-0045/c/	Station 1	3/14-15/95	51200	1445	1851	27.66						
Q-0046/c/	Station 2	3/14-15/95	39100	1470	1272	30.75						
--	Station 3	/b/	--	--	--	--						
Q-0047/c/	Station 4	3/14-15/95	43200	1485	2032	21.26						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-5194	Station 1	2/27-28/95										
Q-5195	Station 2	2/27-28/95	1.44	0.0011	33.33	0.025	11.75	0.009	14.79	0.011	ND	--
Q-5198	Station 3	2/27-28/95										
Q-5199	Station 4	2/27-28/95	1.11	0.0007	39.60	0.025	16.82	0.011	6.27	0.004	ND	--
--	--	2/28-3/1/95	No sampling. Limited dust-generating work performed on 2/28/95.									
Q-5200	Station 1	3/1-2/95	0.79	0.0003	32.58	0.013	27.32	0.011	6.02	0.002	ND	--
Q-0001	Station 2	3/1-2/95										
Q-0003	Station 3	3/1-2/95										
Q-0002	Station 4	3/1-2/95	0.95	0.0005	28.07	0.016	41.85	0.024	15.79	0.009	ND	--
--	--	3/2-3/95	Previous sampling period extended to cover work during morning of 3/2/95.									
--	--	3/3/95	No sampling. Scheduled day off for contractor.									
Q-5196 /c/	Station 1	3/6-7/95										
Q-5197 /c/	Station 2	3/6-7/95										
--	Station 3	/b/										
Q-0040 /c/	Station 4	3/6-7/95										
Q-0041	Station 1	3/7-8/95	1.92	0.0010	153.40	0.082	52.88	0.028	8.77	0.005	ND	--
Q-0042	Station 2	3/7-8/95	1.19	0.0009	66.41	0.048	11.83	0.009	8.27	0.006	ND	--
Q-0043	Station 3	3/7-8/95										
Q-0044	Station 4	3/7-8/95										
--	--	3/8-9/95	No sampling. Limited dust-generating work performed on 3/8/95.									
--	--	3/9-10/95	No sampling. No demolition work performed 3/9/95.									
--	--	3/10/95	No sampling. No demolition work performed 3/10/95.									
--	--	3/13-14/95	No sampling. Limited dust-generating work performed on 3/13/95.									
Q-0045 /c/	Station 1	3/14-15/95										
Q-0046 /c/	Station 2	3/14-15/95										
--	Station 3	/b/										
Q-0047 /c/	Station 4	3/14-15/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0048	Station 1	3/15-16/95	96500	1470	1886	51.17	17.79	0.009	82.20	0.044	1.44	0.0008
Q-0049	Station 2	3/15-16/95	69800	1455	1260	55.38						
--	Station 3	/b/	--	--	--	--						
Q-0050	Station 4	3/15-16/95	12200	250	343	35.61	ND	--	21.30	0.062	ND	--
Q-0051	Station 1	3/16-17/95	103100	1530	1967	52.42	4.76	0.002	84.71	0.043	0.51	0.0003
Q-0052	Station 2	3/16-17/95	103800	1520	1518	68.38						
--	Station 3	/b/										
Q-0053	Station 4	3/16-17/95	107400	1505	2067	51.97	5.01	0.002	164.20	0.079	0.73	0.0004
--	--	3/17/95	No sampling.	Scheduled day off for contractor.								
--	--	3/20-21/95	No sampling.	No demolition work performed 3/20/95.								
Q-0054	Station 1	3/21-22/95	41700	1485	1907	21.87	4.01	0.002	55.14	0.029	ND	--
Q-0055	Station 2	3/21-22/95	34500	1485	1481	23.29						
--	Station 3	/b/										
Q-0056	Station 4	3/21-22/95	43300	1480	2030	21.33	9.77	0.005	75.94	0.037	0.28	0.0001
--	--	3/22-23/95	No sampling.	No demolition work performed 3/22/95.								
--	--	3/23-24/95	No sampling.	No demolition work performed 3/23/95.								
Q-0057/cl	Station 1	3/24/95	16500	385	492	33.52						
Q-0058/cl	Station 2	3/24/95	14600	375	372	39.20						
Q-0059/cl	Station 3	3/24/95	11300	375	426	26.52						
Q-0347/cl	Station 4	3/24/95	12800	370	496	25.81						
Q-0348	Station 1	3/27-28/95	66800	1450	1862	35.88	38.60	0.021	112.50	0.060	0.81	0.0004
--	Station 2	/b/										
Q-0350	Station 3	3/27-28/95	48400	1445	1649	29.35						
Q-0351	Station 4	3/27-28/95	71600	1455	1959	36.55	38.60	0.020	144.10	0.074	0.82	0.0004
Q-0352	Station 1	3/28-29/95	94200	1515	1884	50.00	52.88	0.028	170.70	0.091	1.00	0.0005
--	Station 2	/b/										
Q-0354	Station 3	3/28-29/95	62600	1390	1594	39.27						
Q-0355	Station 4	3/28-29/95	110800	1540	2123	52.19	43.11	0.020	174.90	0.082	1.26	0.0006

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0048	Station 1	3/15-16/95	1.95	0.0010	29.82	0.016	9.92	0.005	16.79	0.009	ND	--
Q-0049	Station 2	3/15-16/95										
--	Station 3	/b/										
Q-0050	Station 4	3/15-16/95	0.06	0.0002	5.94	0.017	1.87	0.005	4.26	0.012	ND	--
Q-0051	Station 1	3/16-17/95	0.34	0.0002	28.57	0.015	9.05	0.005	14.29	0.007	ND	--
Q-0052	Station 2	3/16-17/95										
--	Station 3	/b/										
Q-0053	Station 4	3/16-17/95	0.56	0.0003	104.30	0.050	10.60	0.005	63.66	0.031	ND	--
--	--	3/17/95	No sampling. Scheduled day off for contractor.									
--	--	3/20-21/95	No sampling. No demolition work performed 3/20/95.									
Q-0054	Station 1	3/21-22/95	0.11	0.0001	6.72	0.004	1.59	0.001	ND	--	ND	--
Q-0055	Station 2	3/21-22/95										
--	Station 3	/b/										
Q-0056	Station 4	3/21-22/95	0.26	0.0001	9.70	0.005	4.16	0.002	6.77	0.003	2.51	0.001
--	--	3/22-23/95	No sampling. No demolition work performed 3/22/95.									
--	--	3/23-24/95	No sampling. No demolition work performed 3/23/95.									
Q-0057/b/	Station 1	3/24/95										
Q-0058/b/	Station 2	3/24/95										
Q-0059/b/	Station 3	3/24/95										
Q-0347/b/	Station 4	3/24/95										
Q-0348	Station 1	3/27-28/95	0.51	0.0003	67.17	0.036	7.95	0.004	7.52	0.004	ND	--
--	Station 2	/b/										
Q-0350	Station 3	3/27-28/95										
Q-0351	Station 4	3/27-28/95	0.56	0.0003	90.47	0.046	10.63	0.005	21.80	0.011	ND	--
Q-0352	Station 1	3/28-29/95	0.81	0.0004	53.13	0.028	17.57	0.009	14.29	0.008	ND	--
--	Station 2	/b/										
Q-0354	Station 3	3/28-29/95										
Q-0355	Station 4	3/28-29/95	0.56	0.0003	40.35	0.021	14.06	0.007	14.29	0.008	ND	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0349	Station 1	3/29-30/95	82200	1400	1773	46.36	43.61	0.025	135.80	0.077	1.36	0.0008
Q-0353	Station 2	3/29-30/95	71900	1405	1409	51.05						
--	Station 3	/b/										
Q-0356	Station 4	3/29-30/95	104200	1415	1842	56.58	46.61	0.025	158.60	0.086	1.51	0.0008
Q-0357	Station 1	3/30-31/95	84700	1275	1583	53.51	36.09	0.023	184.00	0.116	1.04	0.0007
Q-0358	Station 2	3/30-31/95	98800	1320	1322	74.71	35.09	0.027	144.90	0.110	0.99	0.0008
Q-0359	Station 3	3/30-31/95	82400	1295	1409	58.49						
Q-0360	Station 4	3/30-31/95	92000	1305	1731	53.15						
--	--	3/31/95	No sampling. Scheduled day off for contractor.									
Q-0361	Station 1	4/3-4/95	61600	1495	1577	39.06	17.54	0.011	102.80	0.065	0.36	0.0002
--	Station 2	/b/										
Q-0362	Station 3	4/3-4/95	245000	1490	1572	155.85	75.69	0.048	636.00	0.405	2.03	0.0013
Q-0363	Station 4	4/3-4/95	130700	1500	1923	67.97						
Q-0364	Station 1	4/4-5/95	63200	1475	1493	42.34	20.80	0.014	231.10	0.155	0.32	0.0002
--	Station 2	/b/										
Q-0365	Station 3	4/4-5/95	191100	1490	1577	121.20	42.86	0.027	491.20	0.312	1.29	0.0008
Q-0366	Station 4	4/4-5/95	96800	1490	1916	50.53						
Q-0367	Station 1	4/5-6/95	50500	1405	1425	35.43	34.33	0.024	117.50	0.082	0.36	0.0003
Q-0368	Station 2	4/5-6/95	45400	1435	1417	32.04						
Q-0369	Station 3	4/5-6/95	72100	1430	1557	46.31	37.09	0.024	275.70	0.177	0.47	0.0003
Q-0370	Station 4	4/5-6/95	76300	1430	1954	39.05						
Q-0371/c/	Station 1	4/6-7/95	27900	1660	1683	16.58						
Q-0372/c/	Station 2	4/6-7/95	22800	1620	1599	14.26						
Q-0373/c/	Station 3	4/6-7/95	39800	1615	1712	23.25						
Q-0374/c/	Station 4	4/6-7/95	38000	1605	2150	17.67						
--	--	4/7/95	Previous sampling period extended to cover work during morning of 4/7/95.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0349	Station 1	3/29-30/95	0.44	0.0002	39.60	0.022	10.53	0.006	7.77	0.004	ND	--
Q-0353	Station 2	3/29-30/95										
--	Station 3	/b/										
Q-0356	Station 4	3/29-30/95	1.72	0.0009	50.88	0.028	14.46	0.008	11.03	0.006	ND	--
Q-0357	Station 1	3/30-31/95	0.68	0.0004	44.61	0.028	11.30	0.007	9.52	0.006	ND	--
Q-0358	Station 2	3/30-31/95	1.12	0.0008	56.64	0.043	21.23	0.016	19.30	0.015	ND	--
Q-0359	Station 3	3/30-31/95										
Q-0360	Station 4	3/30-31/95										
--	--	3/31/95	No sampling. Scheduled day off for contractor.									
Q-0361	Station 1	4/3-4/95	0.25	0.0002	27.07	0.017	14.99	0.010	3.51	0.002	ND	--
--	Station 2	/b/										
Q-0362	Station 3	4/3-4/95	1.36	0.0009	380.90	0.242	32.33	0.021	120.30	0.077	10.65	0.007
Q-0363	Station 4	4/3-4/95										
Q-0364	Station 1	4/4-5/95	0.76	0.0005	21.20	0.014	4.44	0.003	3.01	0.002	ND	--
--	Station 2	/b/										
Q-0365	Station 3	4/4-5/95	0.92	0.0006	219.00	0.139	17.67	0.011	87.47	0.055	11.28	0.007
Q-0366	Station 4	4/4-5/95										
Q-0367	Station 1	4/5-6/95	0.36	0.0002	36.09	0.025	18.17	0.013	6.52	0.005	ND	--
Q-0368	Station 2	4/5-6/95										
Q-0369	Station 3	4/5-6/95	0.76	0.0005	85.71	0.055	12.18	0.008	59.90	0.038	14.57	0.009
Q-0370	Station 4	4/5-6/95										
Q-0371/c/	Station 1	4/6-7/95										
Q-0372/c/	Station 2	4/6-7/95										
Q-0373/c/	Station 3	4/6-7/95										
Q-0374/c/	Station 4	4/6-7/95										
--	--	4/7/95	Previous sampling period extended to cover work during morning of 4/7/95.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0375/cl	Station 1	4/10-11/95	47900	1470	1487	32.21						
Q-0376/cl	Station 2	4/10-11/95	53900	1465	1442	37.37						
Q-0377/cl	Station 3	4/10-11/95	94700	1465	1549	61.12						
Q-0378/cl	Station 4	4/10-11/95	83200	1460	1952	42.63						
--	--	4/11-12/95	No sampling. Limited dust-generating work performed on 4/11/95.									
Q-0379	Station 1	4/12-13/95	79700	1420	1437	55.46	18.55	0.013	3459.00	2.407	0.94	0.0007
Q-0380	Station 2	4/12-13/95	63100	1425	1439	43.84						
Q-0381	Station 3	4/12-13/95	160600	1430	1593	100.80	42.60	0.027	2489.00	1.562	1.42	0.0009
Q-0382	Station 4	4/12-13/95	103600	1430	1913	54.17						
Q-0383	Station 1	4/13-14/95	93800	1460	1468	63.88	42.10	0.029	206.80	0.141	0.25	0.0002
Q-0384	Station 2	4/13-14/95	142300	1455	1460	97.46						
Q-0385	Station 3	4/13-14/95	151900	1450	1565	97.06	63.66	0.041	396.00	0.253	0.47	0.0003
Q-0386	Station 4	4/13-14/95	163300	1445	1920	85.04						
--	--	4/14/95	No sampling. Scheduled day off for contractor.									
Q-5982/cl	Station 1	4/17-18/95	29500	1475	1483	19.90						
Q-5983/cl	Station 2	4/17-18/95	21500	1485	1563	13.76						
Q-5984/cl	Station 3	4/17-18/95	40300	1490	1566	25.74						
Q-5985/cl	Station 4	4/17-18/95	38200	1505	1999	19.11						
Q-5986	Station 1	4/18-19/95	73900	1630	1606	46.02	23.81	0.015	65.41	0.041	ND	--
Q-5987	Station 2	4/18-19/95	101600	1630	1640	61.96						
Q-5988	Station 3	4/18-19/95	118400	1630	1673	70.78	31.33	0.019	283.20	0.169	0.41	0.0002
Q-5989	Station 4	4/18-19/95	137400	1630	2172	63.27						
Q-5990	Station 1	4/19-20/95	56200	1435	1430	39.30	35.09	0.025	78.69	0.055	ND	--
Q-5991	Station 2	4/19-20/95	95700	1435	1337	71.57	34.33	0.026	263.10	0.197	0.32	0.0002
Q-5992	Station 3	4/19-20/95	73600	1440	1437	51.20						
Q-5993	Station 4	4/19-20/95	88500	1440	1918	46.14						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0375/cl	Station 1	4/10-11/95										
Q-0376/cl	Station 2	4/10-11/95										
Q-0377/cl	Station 3	4/10-11/95										
Q-0378/cl	Station 4	4/10-11/95										
--	--	4/11-12/95	No sampling. Limited dust-generating work performed on 4/11/95.									
Q-0379	Station 1	4/12-13/95	2.08	0.0014	34.08	0.024	10.07	0.007	ND	--	ND	--
Q-0380	Station 2	4/12-13/95										
Q-0381	Station 3	4/12-13/95	1.99	0.0012	204.50	0.128	20.48	0.013	88.72	0.056	19.23	0.012
Q-0382	Station 4	4/12-13/95										
Q-0383	Station 1	4/13-14/95	0.26	0.0002	39.35	0.027	6.07	0.004	ND	--	ND	--
Q-0384	Station 2	4/13-14/95										
Q-0385	Station 3	4/13-14/95	0.54	0.0003	180.40	0.115	14.24	0.009	83.46	0.053	13.91	0.009
Q-0386	Station 4	4/13-14/95										
--	--	4/14/95	No sampling. Scheduled day off for contractor.									
Q-5982/cl	Station 1	4/17-18/95										
Q-5983/cl	Station 2	4/17-18/95										
Q-5984/cl	Station 3	4/17-18/95										
Q-5985/cl	Station 4	4/17-18/95										
Q-5986	Station 1	4/18-19/95	0.14	0.0001	19.77	0.012	3.86	0.002	ND	--	ND	--
Q-5987	Station 2	4/18-19/95										
Q-5988	Station 3	4/18-19/95	0.39	0.0002	98.49	0.059	12.08	0.007	63.41	0.038	4.29	0.003
Q-5989	Station 4	4/18-19/95										
Q-5990	Station 1	4/19-20/95	0.71	0.0005	16.77	0.012	3.68	0.003	ND	--	ND	--
Q-5991	Station 2	4/19-20/95	0.39	0.0003	102.00	0.076	8.97	0.007	56.14	0.042	18.48	0.014
Q-5992	Station 3	4/19-20/95										
Q-5993	Station 4	4/19-20/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-5994	Station 1	4/20-21/95	71800	1500	1510	47.57	19.08	0.013	87.97	0.058	ND	--
Q-5995	Station 2	4/20-21/95	76200	1530	1499	50.84						
Q-5996/e/	Station 3	4/20-21/95	38500	--	--	--						
Q-5997	Station 4	4/20-21/95	94700	1510	1930	49.06	25.06	0.013	213.30	0.110	0.47	0.0002
--	--	4/21/95	Previous sampling period extended to cover work during morning of 4/21/95.									
Q-5998	Station 1	4/24-25/95	63300	1480	1627	38.91	12.28	0.008	52.88	0.033	0.34	0.0002
Q-5999	Station 2	4/24-25/95	107900	1475	1447	74.59						
Q-6000	Station 3	4/24-25/95	232800	1485	1482	157.13	62.65	0.042	827.00	0.558	1.76	0.0012
Q-6001	Station 4	4/24-25/95	172600	1495	1914	90.20						
Q-6002/c/	Station 1	4/25-26/95	71500	1515	1492	47.93						
Q-6003/c/	Station 2	4/25-26/95	148000	1515	1486	99.60						
Q-6004/c,e/	Station 3	4/25-26/95	177600	--	--	--						
Q-6005/c/	Station 4	4/25-26/95	172400	1505	2081	82.83						
Q-0439	Station 1	4/26-27/95	29300	1345	1331	22.01	10.53	0.008	34.84	0.026	ND	--
Q-0440	Station 2	4/26-27/95	34900	1345	1326	26.32						
Q-0441	Station 3	4/26-27/95	51000	1340	1456	35.02	12.78	0.009	128.60	0.088	ND	--
Q-0442	Station 4	4/26-27/95	58200	1340	1759	33.09						
Q-0443/c/	Station 1	4/27-28/95	21100	1360	1349	15.64						
Q-0444/c/	Station 2	4/27-28/95	25200	1370	1252	20.13						
Q-0445/c/	Station 3	4/27-28/95	36400	1375	1460	24.94						
Q-0446/c/	Station 4	4/27-28/95	26200	1390	1829	14.33						
--	--	4/28/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	--	--	--	--	16.29	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	19.74	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	25.56	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	7.77	--	ND	--	ND	--
Blank /d/	--	--	--	--	--	--	7.52	--	4.76	--	ND	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-5994	Station 1	4/20-21/95	0.22	0.0001	18.75	0.012	3.96	0.003	ND	--	ND	--
Q-5995	Station 2	4/20-21/95										
Q-5996/e/	Station 3	4/20-21/95										
Q-5997	Station 4	4/20-21/95	0.35	0.0002	89.97	0.047	9.07	0.005	36.09	0.019	ND	--
--	--	4/21/95	Previous sampling period extended to cover work during morning of 4/21/95.									
Q-5998	Station 1	4/24-25/95	0.19	0.0001	18.17	0.011	5.71	0.004	ND	--	ND	--
Q-5999	Station 2	4/24-25/95										
Q-6000	Station 3	4/24-25/95	1.05	0.0005	318.30	0.166	28.07	0.015	183.00	0.124	20.02	0.014
Q-6001	Station 4	4/24-25/95										
Q-6002/c/	Station 1	4/25-26/95										
Q-6003/c/	Station 2	4/25-26/95										
Q-6004/c,e/	Station 3	4/25-26/95										
Q-6005/c/	Station 4	4/25-26/95										
Q-0439	Station 1	4/26-27/95	0.08	0.00006	12.18	0.009	4.21	0.003	ND	--	ND	--
Q-0440	Station 2	4/26-27/95										
Q-0441	Station 3	4/26-27/95	0.20	0.00014	49.37	0.034	12.76	0.009	22.56	0.015	8.49	0.006
Q-0442	Station 4	4/26-27/95										
Q-0443/b/	Station 1	4/27-28/95										
Q-0444/b/	Station 2	4/27-28/95										
Q-0445/b/	Station 3	4/27-28/95										
Q-0446/b/	Station 4	4/27-28/95										
--	--	4/28/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	ND	--	ND	--	ND	--	ND	--
Blank /d/	--	--	ND	--	0.34	--	ND	--	4.76	--	ND	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0447/a/	Station 1	5/1-2/95	22100	1380	1278	17.30						
Q-0448/a/	Station 2	5/1-2/95	27500	1385	1577	17.43						
Q-0449/a/	Station 3	5/1-2/95	41800	1390	1674	24.97						
Q-0450/a/	Station 4	5/1-2/95	28800	1395	2078	13.86						
Q-0451	Station 1	5/2-3/95	51200	1565	1798	28.48	26.31	0.015	108.50	0.060	ND (0.25)	--
Q-0452	Station 2	5/2-3/95	68500	1560	1564	43.79						
Q-0453	Station 3	5/2-3/95	158800	1555	1753	90.58	55.39	0.032	531.30	0.303	0.87	0.0005
Q-0454	Station 4	5/2-3/95	136700	1550	2258	60.54						
Q-0455	Station 1	5/3-4/95	65200	1275	1466	44.46	31.08	0.021	179.20	0.122	0.33	0.0002
Q-0456	Station 2	5/3-4/95	97400	1275	1280	76.10						
Q-0457	Station 3	5/3-4/95	146900	1275	1439	102.08	58.39	0.041	508.80	0.354	0.93	0.0006
Q-0458	Station 4	5/3-4/95	137300	1285	1911	71.84						
Q-0459/a/	Station 1	5/4/95	26700	420	475	56.23						
Q-0460/a/	Station 2	5/4/95	28300	415	418	67.75						
Q-0461/a/	Station 3	5/4/95	39300	410	464	84.70						
Q-0462/a/	Station 4	5/4/95	40000	405	592	67.54						
Q-0463	Station 1	5/5/95	78700	410	472	166.77	31.83	0.067	135.60	0.287	ND (0.25)	--
Q-0464	Station 2	5/5/95	198700	405	407	488.35						
Q-0465	Station 3	5/5/95	255500	405	457	558.52	101.50	0.222	1123.00	2.455	1.98	0.0043
Q-0466	Station 4	5/5/95	220300	415	606	363.71						
Q-0467/a/	Station 1	5/8/95	25200	460	540	46.70						
Q-0468/a/	Station 2	5/8/95	17500	470	522	33.52						
Q-0469/a/	Station 3	5/8/95	39800	480	542	73.44						
Q-0470/a/	Station 4	5/8/95	116700	485	708	164.93						
Q-0471/a/	Station 1	5/9/95	21400	440	495	43.21						
Q-0472/a/	Station 2	5/9/95	22200	400	380	58.50						
Q-0473/a/	Station 3	5/9/95	21500	445	501	42.89						
Q-0474/a/	Station 4	5/9/95	24900	455	689	36.17						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0447/a/	Station 1	5/1-2/95										
Q-0448/a/	Station 2	5/1-2/95										
Q-0449/a/	Station 3	5/1-2/95										
Q-0450/a/	Station 4	5/1-2/95										
Q-0451	Station 1	5/2-3/95	0.16	0.0001	11.88	0.007	4.26	0.002	4.51	0.003	ND (0.9398)	--
Q-0452	Station 2	5/2-3/95										
Q-0453	Station 3	5/2-3/95	0.82	0.0005	201.00	0.115	18.35	0.010	100.00	0.057	11.28	0.006
Q-0454	Station 4	5/2-3/95										
Q-0455	Station 1	5/3-4/95	0.16	0.0001	14.59	0.010	12.41	0.008	4.76	0.003	ND (0.9398)	--
Q-0456	Station 2	5/3-4/95										
Q-0457	Station 3	5/3-4/95	0.77	0.0005	184.20	0.128	15.54	0.011	89.22	0.062	5.33	0.004
Q-0458	Station 4	5/3-4/95										
Q-0459/a/	Station 1	5/4/95										
Q-0460/a/	Station 2	5/4/95										
Q-0461/a/	Station 3	5/4/95										
Q-0462/a/	Station 4	5/4/95										
Q-0463	Station 1	5/5/95	0.49	0.0010	48.62	0.103	8.50	0.018	9.02	0.019	ND (0.9398)	--
Q-0464	Station 2	5/5/95										
Q-0465	Station 3	5/5/95	1.77	0.0039	558.90	1.222	43.36	0.095	234.60	0.513	17.86	0.039
Q-0466	Station 4	5/5/95										
Q-0467/a/	Station 1	5/8/95										
Q-0468/a/	Station 2	5/8/95										
Q-0469/a/	Station 3	5/8/95										
Q-0470/a/	Station 4	5/8/95										
Q-0471/a/	Station 1	5/9/95										
Q-0472/a/	Station 2	5/9/95										
Q-0473/a/	Station 3	5/9/95										
Q-0474/a/	Station 4	5/9/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-0475	Station 1	5/10/95	56500	460	529	106.85	27.07	0.051	141.30	0.267	0.37	0.0007
Q-0476	Station 2	5/10/95	29500	460	486	60.70						
Q-0488	Station 3	5/10/95	42200	460	609	69.28						
Q-0489	Station 4	5/10/95	73800	475	720	102.54	25.31	0.035	255.60	0.355	0.65	0.0009
Q-0477	Station 1	5/11/95	38800	450	518	74.96	30.58	0.059	253.10	0.489	0.38	0.0007
Q-0478	Station 2	5/11/95	48600	445	470	103.30						
Q-0479	Station 3	5/11/95	55900	445	546	102.39						
Q-0480	Station 4	5/11/95	61200	445	662	92.47	17.79	0.027	295.70	0.447	0.55	0.0008
--	--	5/12/95	No sampling. Scheduled day off for contractor.									
Q-0481/a/	Station 1	5/15/95	10100	420	380	26.59						
Q-0482/a/	Station 2	5/15/95	17300	420	434	39.86						
Q-0483/a/	Station 3	5/15/95	23600	425	481	49.06						
Q-0484/a/	Station 4	5/15/95	24800	435	649	38.23						
Q-0485	Station 1	5/16/95	18500	250	272	68.04	6.02	0.022	148.60	0.546	ND (0.25)	--
Q-0486	Station 2	5/16/95	54000	485	515	104.81	21.30	0.041	241.30	0.468	0.28	0.0005
Q-0487	Station 3	5/16/95	53000	490	580	91.40						
Q-0490	Station 4	5/16/95	41000	505	755	54.32						
Q-0491	Station 1	5/17/95	23400	435	423	55.27	8.02	0.019	248.60	0.587	0.28	0.0007
Q-0492	Station 2	5/17/95	21200	440	512	41.37						
Q-0493	Station 3	5/17/95	46400	450	530	87.49	14.79	0.028	197.00	0.371	0.69	0.0013
Q-0494	Station 4	5/17/95	29600	450	670	44.20						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0475	Station 1	5/10/95	0.24	0.0005	31.58	0.060	23.53	0.044	13.78	0.026	ND (0.9398)	--
Q-0476	Station 2	5/10/95										
Q-0488	Station 3	5/10/95										
Q-0489	Station 4	5/10/95	0.45	0.0006	88.72	0.123	21.30	0.030	49.37	0.069	7.83	0.011
Q-0477	Station 1	5/11/95	0.22	0.0004	15.49	0.030	3.41	0.007	4.26	0.008	ND (0.9398)	--
Q-0478	Station 2	5/11/95										
Q-0479	Station 3	5/11/95										
Q-0480	Station 4	5/11/95	0.47	0.0007	103.50	0.156	11.68	0.018	51.63	0.078	6.27	0.009
--	--	5/12/95	No sampling. Scheduled day off for contractor.									
Q-0481/a/	Station 1	5/15/95										
Q-0482/a/	Station 2	5/15/95										
Q-0483/a/	Station 3	5/15/95										
Q-0484/a/	Station 4	5/15/95										
Q-0485	Station 1	5/16/95	0.08	0.0003	5.14	0.019	1.33	0.005	2.51	0.009	ND (0.9398)	--
Q-0486	Station 2	5/16/95	0.27	0.0005	67.67	0.131	5.71	0.011	47.12	0.091	5.95	0.012
Q-0487	Station 3	5/16/95										
Q-0490	Station 4	5/16/95										
Q-0491	Station 1	5/17/95	0.08	0.0002	4.59	0.011	1.65	0.004	2.51	0.006	ND (0.9398)	--
Q-0492	Station 2	5/17/95										
Q-0493	Station 3	5/17/95	0.28	0.0005	42.35	0.080	9.80	0.018	30.58	0.058	6.58	0.012
Q-0494	Station 4	5/17/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0495/a/	Station 1	5/18/95	39800	450	447	89.13						
Q-0496/a/	Station 2	5/18/95	38900	470	496	78.37						
Q-0497/a/	Station 3	5/18/95	55200	480	565	97.74						
Q-0498/a/	Station 4	5/18/95	54900	485	735	74.74						
Q-0499	Station 1	5/19/95	46300	425	423	109.34	13.53	0.032	102.30	0.242	ND (0.25)	--
Q-0500	Station 2	5/19/95	40800	415	440	92.70						
Q-0774	Station 3	5/19/95	54600	415	531	102.80						
Q-0775	Station 4	5/19/95	151500	415	619	244.69	51.38	0.083	278.20	0.449	0.80	0.0013
Q-0806/a/	Station 1	5/22/95	30200	425	422	71.55						
Q-0831/a/	Station 2	5/22/95	35700	415	439	81.39						
Q-0832/a/	Station 3	5/22/95	41600	440	507	82.00						
Q-0833/a/	Station 4	5/22/95	110100	455	677	162.73						
Q-0834	Station 1	5/23/95	41400	445	452	91.50	9.27	0.020	38.34	0.085	ND (0.25)	--
Q-0835	Station 2	5/23/95	123800	455	482	256.65						
Q-0836	Station 3	5/23/95	368500	460	532	692.73	117.80	0.221	1529.00	2.874	2.86	0.005
Q-0837	Station 4	5/23/95	432400	470	687	629.05	152.60	0.222	2098.00	3.052	4.04	0.006
Q-0838	Station 1	5/24/95	45200	465	462	97.76	8.77	0.019	122.10	0.264	ND (0.25)	--
Q-0839	Station 2	5/24/95	75800	470	497	152.39						
Q-0840	Station 3	5/24/95	142600	475	537	265.69	41.85	0.078	518.80	0.967	0.92	0.002
Q-0841	Station 4	5/24/95	128800	480	701	183.79						
Q-0842/a/	Station 1	5/25/95	28800	470	467	61.65						
Q-0843/a/	Station 2	5/25/95	47800	465	492	97.16						
Q-0844/a/	Station 3	5/25/95	110200	465	537	205.35						
Q-0845/a/	Station 4	5/25/95	126400	470	713	177.26						
--	--	5/26/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	--	--	--	--	10.28	--	2.26	--	ND (0.25)	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0495/a/	Station 1	5/18/95										
Q-0496/a/	Station 2	5/18/95										
Q-0497/a/	Station 3	5/18/95										
Q-0498/a/	Station 4	5/18/95										
Q-0499	Station 1	5/19/95	0.22	0.0005	13.21	0.031	4.64	0.011	4.26	0.010	ND (0.9398)	--
Q-0500	Station 2	5/19/95										
Q-0774	Station 3	5/19/95										
Q-0775	Station 4	5/19/95	0.47	0.0008	87.21	0.141	16.47	0.027	46.36	0.075	6.58	0.011
Q-0806/a/	Station 1	5/22/95										
Q-0831/a/	Station 2	5/22/95										
Q-0832/a/	Station 3	5/22/95										
Q-0833/a/	Station 4	5/22/95										
Q-0834	Station 1	5/23/95	0.11	0.0002	10.38	0.023	2.08	0.005	3.01	0.007	ND (0.9398)	--
Q-0835	Station 2	5/23/95										
Q-0836	Station 3	5/23/95	2.53	0.0048	694.20	1.305	55.89	0.105	330.80	0.622	31.01	0.058
Q-0837	Station 4	5/23/95	3.89	0.0057	1028.00	1.496	94.23	0.137	411.00	0.598	32.37	0.047
Q-0838	Station 1	5/24/95	0.09	0.0002	5.59	0.012	3.48	0.008	3.26	0.007	ND (0.9398)	--
Q-0839	Station 2	5/24/95										
Q-0840	Station 3	5/24/95	0.91	0.0017	212.50	0.396	17.92	0.033	101.20	0.189	14.72	0.027
Q-0841	Station 4	5/24/95										
Q-0842/a/	Station 1	5/25/95										
Q-0843/a/	Station 2	5/25/95										
Q-0844/a/	Station 3	5/25/95										
Q-0845/a/	Station 4	5/25/95										
--	--	5/26/95	No sampling. Scheduled day off for contractor.									
Blank /d/	--	--	ND (.0125)	--	0.40	--	1.08	--	ND (2.506)	--	ND (0.9398)	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0846	Station 1	5/30/95	18700	450	507	36.88	11.28	0.022	49.87	0.098	ND (.2506)	--
Q-0847	Station 2	5/30/95	53200	450	462	115.15						
Q-0848	Station 3	5/30/95	82800	455	461	179.61						
Q-0849	Station 4	5/30/95	105600	455	575	183.65	29.57	0.051	333.30	0.580	0.78	0.001
Q-0850	Station 1	5/31/95	28600	475	521	54.89	17.79	0.034	60.40	0.116	ND (.2506)	--
Q-0851	Station 2	5/31/95	40000	485	495	80.81						
Q-0852/b/	Station 3	5/31/95	42200	--	--	--						
Q-0853	Station 4	5/31/95	214900	490	622	345.50	60.90	0.098	438.60	0.705	1.38	0.0022
Q-0854/a/	Station 1	6/1/95	46900	455	577	81.28						
Q-0855/a/	Station 2	6/1/95	84400	460	484	174.38						
Q-0856/a,b/	Station 3	6/1/95	42700	467	461	92.62						
Q-0857/a/	Station 4	6/1/95	131200	464	598	219.40						
Q-0858	Station 1	6/2/95	31800	400	488	65.16	12.28	0.025	132.60	0.272	ND (.2506)	--
Q-0859	Station 2	6/2/95	44300	400	420	105.48						
Q-0860/b/	Station 3	6/2/95	40300	--	--	--						
Q-0861	Station 4	6/2/95	79000	400	510	154.90	26.06	0.051	153.60	0.301	0.29	0.0006
Q-0862	Station 1	6/5/95	47100	455	588	80.10	15.04	0.026	54.13	0.092	ND (.2506)	--
Q-0863	Station 2	6/5/95	78500	445	453	173.29	22.05	0.049	142.90	0.315	ND (.2506)	--
Q-0864	Station 3	6/5/95	72500	427	456	158.99						
Q-0865	Station 4	6/5/95	56500	443	566	99.82						
Q-0866	Station 1	6/6/95	33000	425	556	59.35	11.78	0.021	49.12	0.088	ND (.2506)	--
Q-0867	Station 2	6/6/95	36000	425	444	81.08						
Q-0868	Station 3	6/6/95	37200	435	466	79.83	8.27	0.018	73.68	0.158	ND (.2506)	--
Q-0869	Station 4	6/6/95	35400	430	556	63.67						
--	--	6/7/95	No sampling. Sampling media for TSP/metals not available due to laboratory error.									
Q-0870	Station 1	6/8/95	55500	515	667	83.21	17.04	0.026	75.44	0.113	ND (.2506)	--
Q-0886	Station 2	6/8/95	40400	460	441	91.61						
Q-0887	Station 3	6/8/95	60300	460	492	122.56	16.29	0.033	116.80	0.237	0.47	0.001
Q-0888	Station 4	6/8/95	63300	460	566	111.84						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0846	Station 1	5/30/95	0.12	0.0002	13.16	0.0260	2.58	0.005	ND (2.506)	--	ND (0.9398)	--
Q-0847	Station 2	5/30/95										
Q-0848	Station 3	5/30/95										
Q-0849	Station 4	5/30/95	0.91	0.0016	132.30	0.2301	16.24	0.028	66.66	0.116	16.23	0.028
Q-0850	Station 1	5/31/95	0.14	0.0003	14.69	0.028	3.99	0.008	2.76	0.005	ND (0.9398)	--
Q-0851	Station 2	5/31/95										
Q-0852/b/	Station 3	5/31/95										
Q-0853	Station 4	5/31/95	0.74	0.0012	211.00	0.339	23.78	0.038	78.44	0.126	12.37	0.020
Q-0854/a/	Station 1	6/1/95										
Q-0855/a/	Station 2	6/1/95										
Q-0856/a,b/	Station 3	6/1/95										
Q-0857/a/	Station 4	6/1/95										
Q-0858	Station 1	6/2/95	0.24	0.0005	11.53	0.024	2.36	0.005	3.01	0.006	ND (0.9398)	--
Q-0859	Station 2	6/2/95										
Q-0860/b/	Station 3	6/2/95										
Q-0861	Station 4	6/2/95	0.32	0.0006	41.53	0.081	6.07	0.012	24.81	0.049	2.37	0.005
Q-0862	Station 1	6/5/95	0.13	0.0002	19.15	0.033	3.01	0.005	4.51	0.008	ND (0.9398)	--
Q-0863	Station 2	6/5/95	0.29	0.0006	65.41	0.144	5.34	0.012	28.07	0.062	9.24	0.020
Q-0864	Station 3	6/5/95										
Q-0865	Station 4	6/5/95										
Q-0866	Station 1	6/6/95	0.11	0.0002	8.77	0.016	1.33	0.002	3.01	0.005	ND (0.9398)	--
Q-0867	Station 2	6/6/95										
Q-0868	Station 3	6/6/95	0.12	0.0003	29.57	0.063	3.61	0.008	11.28	0.024	ND (0.9398)	--
Q-0869	Station 4	6/6/95										
--	--	6/7/95	No sampling. Sampling media for TSP/metals not available due to laboratory error.									
Q-0870	Station 1	6/8/95	0.20	0.0003	18.85	0.028	7.14	0.011	6.77	0.010	ND (0.9398)	--
Q-0886	Station 2	6/8/95										
Q-0887	Station 3	6/8/95	0.21	0.0004	51.13	0.104	25.31	0.051	24.06	0.049	3.13	0.006
Q-0888	Station 4	6/8/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
--	--	6/9/95	No sampling. Scheduled day off for contractor.									
Q-0889/a/	Station 1	6/12/95	33400	500	624	53.53						
Q-0890/a/	Station 2	6/12/95	27100	500	492	55.08						
Q-0891/a/	Station 3	6/12/95	43500	505	528	82.39						
Q-0892/a,c/	Station 4	6/12/95	45200	500	616	73.38						
Q-0893	Station 1	6/13/95	66600	487	601	110.82	31.83	0.053	96.99	0.161	ND (2506)	--
Q-0894	Station 2	6/13/95	83600	491	473	176.74						
Q-0895	Station 3	6/13/95	100600	491	538	186.99	41.60	0.077	285.70	0.531	0.53	0.001
Q-0896	Station 4	6/13/95	59100	495	606	97.52						
Q-0897/a/	Station 1	6/14/95	15700	478	597	26.30						
Q-0898/a/	Station 2	6/14/95	14400	487	473	30.44						
Q-0899/a/	Station 3	6/14/95	25200	493	501	50.30						
Q-0900/a/	Station 4	6/14/95	17700	495	616	28.73						
Q-0901	Station 1	6/15/95	40500	478	592	68.41	16.54	0.028	53.88	0.091	ND (2506)	--
Q-0902	Station 2	6/15/95	151500	487	480	315.63	47.12	0.098	388.50	0.809	0.73	0.002
Q-0903	Station 3	6/15/95	70600	498	521	135.51						
Q-0904	Station 4	6/15/95	84500	407	517	163.44						
Blank /d/	--	--	--	--	--	--	4.51	--	ND (1.253	--	ND (2506)	--
--	--	6/16/95	No sampling. No activities in exclusion zone due to rain.									
--	--	6/19/95	No sampling. Power outage over entire site.									
--	--	6/20/95	No sampling. Power outage over entire site.									
--	--	6/21/95	No sampling. Power outage over entire site.									
--	--	6/22/95	No sampling. Power outage over entire site.									
--	--	6/23/95	No sampling. Scheduled day off for contractor.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
--	--	6/9/95	No sampling. Scheduled day off for contractor.									
Q-0889/a/	Station 1	6/12/95										
Q-0890/a/	Station 2	6/12/95										
Q-0891/a/	Station 3	6/12/95										
Q-0892/a,c/	Station 4	6/12/95										
Q-0893	Station 1	6/13/95	0.21	0.0004	32.58	0.054	6.87	0.011	5.01	0.008	ND (0.9398)	--
Q-0894	Station 2	6/13/95										
Q-0895	Station 3	6/13/95	0.41	0.0008	133.10	0.247	12.03	0.022	55.64	0.103	9.34	0.017
Q-0896	Station 4	6/13/95										
Q-0897/a/	Station 1	6/14/95										
Q-0898/a/	Station 2	6/14/95										
Q-0899/a/	Station 3	6/14/95										
Q-0900/a/	Station 4	6/14/95										
Q-0901	Station 1	6/15/95	0.15	0.0002	17.97	0.030	8.52	0.014	2.51	0.004	ND (0.9398)	--
Q-0902	Station 2	6/15/95	0.78	0.0016	223.30	0.465	15.89	0.033	76.94	0.160	12.37	0.026
Q-0903	Station 3	6/15/95										
Q-0904	Station 4	6/15/95										
Blank /d/	--	--	ND (.0125)	--	ND (.2506)	--	1.15	--	ND (2.506)	--	ND (0.9398)	--
--	--	6/16/95	No sampling. No activities in exclusion zone due to rain.									
--	--	6/19/95	No sampling. Power outage over entire site.									
--	--	6/20/95	No sampling. Power outage over entire site.									
--	--	6/21/95	No sampling. Power outage over entire site.									
--	--	6/22/95	No sampling. Power outage over entire site.									
--	--	6/23/95	No sampling. Scheduled day off for contractor.									

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0905	Station 1	6/26/95	34200	453	590	57.92	191.50	0.324	191.20	0.324	0.27	0.0005
Q-0906	Station 2	6/26/95	42900	450	467	91.84	60.40	0.129	118.80	0.254	ND (.2506)	--
Q-0907	Station 3	6/26/95	30000	452	493	60.82						
Q-0908	Station 4	6/26/95	40900	448	572	71.50						
Q-0909/a/	Station 1	6/27/95	29400	466	595	49.41						
Q-0912/a/	Station 2	6/27/95	28800	466	488	58.99						
Q-0913/a/	Station 3	6/27/95	27300	469	498	54.82						
Q-0914/a/	Station 4	6/27/95	40500	469	592	68.46						
Q-0915/a/	Station 1	6/28/95	24900	438	559	44.58						
Q-0916/a/	Station 2	6/28/95	37300	438	453	82.33						
Q-0917/a/	Station 3	6/28/95	26000	438	470	55.27						
Q-0918/a/	Station 4	6/28/95	34700	439	570	60.92						
Q-0919	Station 1	6/29/95	29500	451	575	51.35	11.78	0.021	275.70	0.480	ND (.2506)	--
Q-0920	Station 2	6/29/95	87800	447	456	192.35	43.61	0.096	421.00	0.922	0.87	0.002
Q-0921	Station 3	6/29/95	49200	447	468	105.23						
Q-0922	Station 4	6/29/95	39800	452	580	68.60						
Q-0975	Station 1	6/30/95	17700	258	328	53.95	5.26	0.016	92.98	0.283	ND (.2506)	--
Q-0976	Station 2	6/30/95	72800	258	263	276.84	28.07	0.107	265.70	1.010	0.46	0.002
Q-0977	Station 3	6/30/95	24000	261	279	85.87						
Q-0978	Station 4	6/30/95	12800	262	332	38.51						
Q-0979/a/	Station 1	7/3/95	5500	213	263	20.93						
Q-0980/a/	Station 2	7/3/95	17200	204	208	82.88						
Q-0981/a/	Station 3	7/3/95	9900	204	215	45.98						
Q-0982/a/	Station 4	7/3/95	7200	203	242	29.77						
--	--	7/4/95	No sampling. Holiday.									
Q-0983/a/	Station 1	7/5/95	24100	460	569	42.38						
Q-0984/a/	Station 2	7/5/95	28800	458	467	61.70						
Q-0985/a/	Station 3	7/5/95	60100	466	493	121.98						
Q-0986/a/	Station 4	7/5/95	41500	473	588	70.55						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0905	Station 1	6/26/95	0.09	0.0002	13.96	0.024	3.66	0.006	149.90	0.254	5.17	0.009
Q-0906	Station 2	6/26/95	0.11	0.0002	32.33	0.069	3.63	0.008	17.04	0.036	7.52	0.016
Q-0907	Station 3	6/26/95										
Q-0908	Station 4	6/26/95										
Q-0909/a/	Station 1	6/27/95										
Q-0912/a/	Station 2	6/27/95										
Q-0913/a/	Station 3	6/27/95										
Q-0914/a/	Station 4	6/27/95										
Q-0915/a/	Station 1	6/28/95										
Q-0916/a/	Station 2	6/28/95										
Q-0917/a/	Station 3	6/28/95										
Q-0918/a/	Station 4	6/28/95										
Q-0919	Station 1	6/29/95	0.12	0.0002	14.41	0.025	2.00	0.003	ND (2.506)	--	ND (0.9398)	--
Q-0920	Station 2	6/29/95	1.77	0.0039	169.40	0.371	13.33	0.029	73.18	0.160	9.12	0.020
Q-0921	Station 3	6/29/95										
Q-0922	Station 4	6/29/95										
Q-0975	Station 1	6/30/95	ND(0.0125)	--	6.27	0.019	1.06	0.003	ND (2.506)	--	ND (0.9398)	--
Q-0976	Station 2	6/30/95	0.41	0.0016	122.60	0.466	10.15	0.039	63.16	0.240	8.71	0.033
Q-0977	Station 3	6/30/95										
Q-0978	Station 4	6/30/95										
Q-0979/a/	Station 1	7/3/95										
Q-0980/a/	Station 2	7/3/95										
Q-0981/a/	Station 3	7/3/95										
Q-0982/a/	Station 4	7/3/95										
--	--	--	No sampling. Holiday.									
Q-0983/a/	Station 1	7/5/95										
Q-0984/a/	Station 2	7/5/95										
Q-0985/a/	Station 3	7/5/95										
Q-0986/a/	Station 4	7/5/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-0987	Station 1	7/6/95	30800	436	545	56.50	12.78	0.023	62.90	0.115	ND (.2506)	--
Q-0988	Station 2	7/6/95	54200	433	437	124.05						
Q-0989	Station 3	7/6/95	60800	439	471	129.10	21.55	0.046	230.60	0.490	ND (.2506)	--
Q-0990	Station 4	7/6/95	58100	446	556	104.55						
--	--	7/7/95	No sampling. Scheduled day off for contractor.									
Q-0992	Station 1	7/10/95	23900	495	585	40.88	5.76	0.010	44.61	0.076	ND (.2506)	---
Q-0993	Station 2	7/10/95	33400	480	563	59.33						
Q-0994	Station 3	7/10/95	25800	480	573	45.00						
Q-0995	Station 4	7/10/95	79300	395	464	171.03	25.31	0.055	144.60	0.312	0.45	0.001
Q-0996/a/	Station 1	7/11/95	30500	423	500	61.00						
Q-0997/a/	Station 2	7/11/95	20300	414	483	41.99						
Q-0998/a/	Station 3	7/11/95	24800	410	493	50.34						
Q-0999/a/	Station 4	7/11/95	61700	407	478	129.03						
Q-1000	Station 1	7/12/95	14900	440	521	28.61	4.01	0.008	30.58	0.059	ND (.2506)	---
Q-1001	Station 2	7/12/95	43500	448	529	82.24						
Q-1002	Station 3	7/12/95	29200	450	541	53.93						
Q-1003	Station 4	7/12/95	63800	452	532	119.97	19.80	0.037	164.20	0.309	0.45	0.001
Q-1004/a/	Station 1	7/13/95	23500	429	503	46.73						
Q-1005/a/	Station 2	7/13/95	45100	429	501	89.99						
Q-1006/a/	Station 3	7/13/95	27800	371	442	62.89						
Q-1007/a/	Station 4	7/13/95	45600	438	514	88.66						
Q-1008	Station 1	7/14/95	30800	426	496	62.11	15.04	0.030	46.87	0.095	ND (.2506)	---
Q-1009	Station 2	7/14/95	39600	433	501	79.04						
Q-1010	Station 3	7/14/95	43000	433	515	83.51	23.06	0.045	70.67	0.137	0.40	0.001
Q-1011	Station 4	7/14/95	43400	439	508	85.37						
Q-1012/b/	Station 1	7/17/95	20600	400	475	43.34	8.52	0.018	33.33	0.070	ND (.2506)	---
Q-1013/b/	Station 2	7/17/95	31000	341	401	77.25						
Q-1014/b/	Station 3	7/17/95	26800	344	415	64.51						
Q-1015/b/	Station 4	7/17/95	75200	366	431	174.59	27.07	0.063	206.50	0.479	0.68	0.002

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-0987	Station 1	7/6/95	0.06	0.0001	13.46	0.025	2.88	0.005	3.76	0.007	ND (0.9398)	--
Q-0988	Station 2	7/6/95										
Q-0989	Station 3	7/6/95	0.24	0.0005	116.00	0.246	10.75	0.023	51.13	0.109	12.28	0.026
Q-0990	Station 4	7/6/95										
--	--	7/7/95	No sampling. Scheduled day off for contractor.									
Q-0992	Station 1	7/10/95	0.10	0.0002	11.20	0.019	1.54	0.003	ND (2.506)	--	1.19	0.002
Q-0993	Station 2	7/10/95										
Q-0994	Station 3	7/10/95										
Q-0995	Station 4	7/10/95	0.24	0.0005	71.18	0.154	9.02	0.019	21.05	0.045	1.59	0.003
Q-0996/a/	Station 1	7/11/95										
Q-0997/a/	Station 2	7/11/95										
Q-0998/a/	Station 3	7/11/95										
Q-0999/a/	Station 4	7/11/95										
Q-1000	Station 1	7/12/95	ND (.0125)	--	5.09	0.010	ND (.5012)	--	ND (2.506)	--	1.98	0.004
Q-1001	Station 2	7/12/95										
Q-1002	Station 3	7/12/95										
Q-1003	Station 4	7/12/95	0.21	0.0004	65.41	0.123	7.84	0.015	24.31	0.046	2.78	0.005
Q-1004/a/	Station 1	7/13/95										
Q-1005/a/	Station 2	7/13/95										
Q-1006/a/	Station 3	7/13/95										
Q-1007/a/	Station 4	7/13/95										
Q-1008	Station 1	7/14/95	0.26	0.0005	165.40	0.334	20.63	0.042	ND (2.506)	--	1.59	0.003
Q-1009	Station 2	7/14/95										
Q-1010	Station 3	7/14/95	0.30	0.0006	72.43	0.141	21.00	0.041	7.02	0.014	1.98	0.004
Q-1011	Station 4	7/14/95										
Q-1012/b/	Station 1	7/17/95	1.61	0.0034	11.75	0.025	16.32	0.034	13.03	0.027	1.59	0.003
Q-1013/b/	Station 2	7/17/95										
Q-1014/b/	Station 3	7/17/95										
Q-1015/b/	Station 4	7/17/95	0.40	0.0009	90.47	0.210	40.60	0.094	34.84	0.081	4.35	0.010

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-1016/a,b/	Station 1	7/18/95	16600	356	421	39.39						
Q-1017/a,b/	Station 2	7/18/95	21800	338	396	55.10						
Q-1018/a,b/	Station 3	7/18/95	19900	333	399	49.92						
Q-1019/a,b/	Station 4	7/18/95	32600	328	385	84.76						
Q-1020/a/	Station 1	7/19/95	11600	411	490	23.67						
Q-1021/a/	Station 2	7/19/95	32600	418	491	66.39						
Q-1022/a/	Station 3	7/19/95	18100	417	500	36.19						
Q-1023/a/	Station 4	7/19/95	26400	423	498	53.03						
Q-1024	Station 1	7/20/95	14300	460	549	26.07	4.26	0.008	205.80	0.375	ND (.2506)	--
Q-1025/b/	Station 2	7/20/95	35400	423	499	70.91	12.53	0.025	166.70	0.334	0.27	0.001
Q-1026/b/	Station 3	7/20/95	18000	429	520	34.64						
Q-1027	Station 4	7/20/95	23000	466	550	41.82						
--	--	7/21/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	--	--	--	--	6.27	--	ND (1.253	--	ND (.2506)	--
Blank /c/	--	--	--	--	--	--	6.02	--	ND (1.253	--	ND (.2506)	--
Q-1028	Station 1	7/24/95	36200	491	580	62.36	14.03	0.024	54.89	0.095	0.43	0.0007
Q-1029	Station 2	7/24/95	77100	489	574	134.42						
Q-1030	Station 3	7/24/95	46500	487	586	79.32						
Q-1031	Station 4	7/24/95	84900	490	577	147.20	25.56	0.044	222.50	0.386	0.70	0.0012
Q-1032/f/	Station 1	7/25/95	13800	407	485	28.47						
Q-1033/f/	Station 2	7/25/95	15200	414	488	31.18						
Q-1034/f/	Station 3	7/25/95	22600	414	498	45.41						
Q-1035/f/	Station 4	7/25/95	57100	418	492	116.00						
Q-1036/f/	Station 1	7/26/95	23100	417	488	47.31						
Q-1037/f/	Station 2	7/26/95	30300	425	495	61.21						
Q-1038/f/	Station 3	7/26/95	21600	423	504	42.84						
Q-1039/f/	Station 4	7/26/95	30000	429	501	59.83						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1016/a,b/	Station 1	7/18/95										
Q-1017/a,b/	Station 2	7/18/95										
Q-1018/a,b/	Station 3	7/18/95										
Q-1019/a,b/	Station 4	7/18/95										
Q-1020/a/	Station 1	7/19/95										
Q-1021/a/	Station 2	7/19/95										
Q-1022/a/	Station 3	7/19/95										
Q-1023/a/	Station 4	7/19/95										
Q-1024	Station 1	7/20/95	0.02	0.00003	6.87	0.013	1.60	0.003	ND (2.506)	--	1.98	0.004
Q-1025/b/	Station 2	7/20/95	0.18	0.00036	58.39	0.117	5.69	0.011	25.81	0.052	5.95	0.012
Q-1026/b/	Station 3	7/20/95										
Q-1027	Station 4	7/20/95										
--	--	7/21/95	No sampling. Scheduled day off for contractor.									
Blank /c/	--	--	0.05	--	ND (.2506)	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Blank /c/	--	--	0.09	--	0.30	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Q-1028	Station 1	7/24/95	0.96	0.00166	16.44	0.028	3.99	0.007	4.76	0.008	3.13	0.005
Q-1029	Station 2	7/24/95										
Q-1030	Station 3	7/24/95										
Q-1031	Station 4	7/24/95	0.41	0.00071	84.21	0.146	11.68	0.020	35.84	0.062	5.39	0.009
Q-1032/f/	Station 1	7/25/95										
Q-1033/f/	Station 2	7/25/95										
Q-1034/f/	Station 3	7/25/95										
Q-1035/f/	Station 4	7/25/95										
Q-1036/f/	Station 1	7/26/95										
Q-1037/f/	Station 2	7/26/95										
Q-1038/f/	Station 3	7/26/95										
Q-1039/f/	Station 4	7/26/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-1040	Station 1	7/27/95	40100	465	544	73.69	19.80	0.036	83.71	0.154	0.31	0.0006
Q-1041	Station 2	7/27/95	79300	470	546	145.16	28.82	0.053	181.70	0.333	0.74	0.0014
Q-1042/b/	Station 3	7/27/95	66000	452	536	123.18						
Q-1043	Station 4	7/27/95	39000	449	521	74.92						
Q-1044	Station 1	7/28/95	25700	475	559	45.99	12.78	0.023	122.10	0.219	0.29	0.0005
Q-1045	Station 2	7/28/95	50400	477	559	90.21	21.30	0.038	187.00	0.335	0.53	0.0010
Q-1046	Station 3	7/28/95	40500	483	580	69.88						
Q-1047	Station 4	7/28/95	46400	488	573	81.04						
Q-1807	Station 1	7/31/95	47200	412	477	99.05	23.56	0.049	56.89	0.119	0.45	0.0010
Q-1808	Station 2	7/31/95	87300	412	474	183.99						
Q-1809	Station 3	7/31/95	79300	415	488	162.55						
Q-1810	Station 4	7/31/95	99400	421	484	205.55	39.35	0.081	250.60	0.518	0.86	0.0018
Q-1811/f/	Station 1	8/1/95	23700	407	477	49.72						
Q-1812/f/	Station 2	8/1/95	50600	404	468	108.06						
Q-1813/f/	Station 3	8/1/95	49600	409	483	102.74						
Q-1814/f/	Station 4	8/1/95	53600	400	468	114.61						
Q-1815/f/	Station 1	8/2/95	19700	446	524	37.61						
Q-1816/f/	Station 2	8/2/95	57900	367	429	135.03						
Q-1817/f/	Station 3	8/2/95	21000	360	430	48.81						
Q-1818/f/	Station 4	8/2/95	24900	350	410	60.78						
Q-1819	Station 1	8/3/95	40400	457	539	74.92	ND(2.506)	--	45.86	0.085	ND (.2506)	--
Q-1820/b/	Station 2	8/3/95	77100	461	540	142.72						
Q-1821/b/	Station 3	8/3/95	28200	460	548	51.50						
Q-1822/b/	Station 4	8/3/95	308200	462	542	568.29	82.45	0.152	714.30	1.317	2.20	0.0041
Q-1824/f/	Station 1	8/7/95	22700	412	485	46.78						
Q-1825/f/	Station 2	8/7/95	69100	411	482	143.37						
--	Station 3	8/7/95	--	--	--	--						
Q-1827/f/	Station 4	8/7/95	49900	403	472	105.78						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1040	Station 1	7/27/95	0.21	0.00039	17.72	0.033	5.69	0.010	5.26	0.010	1.88	0.003
Q-1041	Station 2	7/27/95	0.58	0.00106	71.68	0.131	11.73	0.021	32.83	0.060	8.52	0.016
Q-1042/b/	Station 3	7/27/95										
Q-1043	Station 4	7/27/95										
Q-1044	Station 1	7/28/95	0.29	0.00052	27.07	0.048	2.91	0.005	4.51	0.008	2.66	0.005
Q-1045	Station 2	7/28/95	0.36	0.00065	65.41	0.117	6.19	0.011	30.83	0.055	8.52	0.015
Q-1046	Station 3	7/28/95										
Q-1047	Station 4	7/28/95										
Q-1807	Station 1	7/31/95	0.03	0.00005	18.55	0.039	4.21	0.009	5.51	0.012	2.27	0.005
Q-1808	Station 2	7/31/95										
Q-1809	Station 3	7/31/95										
Q-1810	Station 4	7/31/95	0.76	0.00158	74.68	0.154	10.90	0.023	34.84	0.072	6.96	0.014
Q-1811/f/	Station 1	8/1/95										
Q-1812/f/	Station 2	8/1/95										
Q-1813/f/	Station 3	8/1/95										
Q-1814/f/	Station 4	8/1/95										
Q-1815/f/	Station 1	8/2/95										
Q-1816/f/	Station 2	8/2/95										
Q-1817/f/	Station 3	8/2/95										
Q-1818/f/	Station 4	8/2/95										
Q-1819	Station 1	8/3/95	ND(0.0125)	--	13.16	0.024	2.50	0.005	3.76	0.007	ND(0.9398)	--
Q-1820/b/	Station 2	8/3/95										
Q-1821/b/	Station 3	8/3/95										
Q-1822/b/	Station 4	8/3/95	1.18	0.00217	237.10	0.437	35.09	0.065	127.10	0.234	17.23	0.032
Q-1824/f/	Station 1	8/7/95										
Q-1825/f/	Station 2	8/7/95										
--	Station 3	8/7/95										
Q-1827/f/	Station 4	8/7/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1828	Station 1	8/8/95	48900	496	575	85.11	13.53	0.024	127.60	0.222	0.61	0.0011
Q-1829	Station 2	8/8/95	43900	500	574	76.52						
Q-1826	Station 3	8/8/95	93200	486	569	163.73	31.83	0.056	216.50	0.380	0.83	0.0015
Q-1830	Station 4	8/8/95	59900	511	587	101.98						
Q-1831	Station 1	8/9/95	48500	463	542	89.42	13.03	0.024	45.61	0.084	0.41	0.0008
Q-1832	Station 2	8/9/95	187100	470	545	343.08	46.11	0.085	466.10	0.855	1.36	0.0025
Q-1833	Station 3	8/9/95	175100	469	553	316.52	47.62	0.086	1108.00	2.003	2.24	0.0041
Q-1834	Station 4	8/9/95	129100	474	549	235.14						
Q-1835//	Station 1	8/10/95	34200	456	537	63.69						
Q-1836//	Station 2	8/10/95	64700	438	514	125.76						
Q-1837//	Station 3	8/10/95	104300	434	517	201.62						
Q-1838//	Station 4	8/10/95	49300	428	503	98.07						
Q-1839	Station 1	8/11/95	20300	408	483	42.05	ND(2.506)	--	40.85	0.085	ND(0.2506)	--
Q-1840	Station 2	8/11/95	71300	414	488	146.07						
Q-1841	Station 3	8/11/95	122900	407	485	253.24	28.57	0.059	383.40	0.790	1.04	0.0021
Q-1842	Station 4	8/11/95	75300	403	474	159.03						
Q-1843	Station 1	8/14/95	47300	472	549	86.20	6.27	0.011	92.48	0.169	0.41	0.0007
Q-1844	Station 2	8/14/95	53600	474	551	97.27						
Q-1845	Station 3	8/14/95	64500	469	551	116.99						
Q-1846	Station 4	8/14/95	94400	466	540	174.85	18.55	0.034	295.70	0.548	0.79	0.0015
Q-1847//	Station 1	8/15/95	38500	429	505	76.28						
Q-1848//	Station 2	8/15/95	45100	429	501	90.06						
Q-1849//	Station 3	8/15/95	53200	431	511	104.11						
Q-1850//	Station 4	8/15/95	43300	433	505	85.82						
Blank /d/	--	--	--	--	--	--	8.27	--	1.50	--	ND (.2506)	--
Blank /d/	--	--	--	--	--	--	29.32	--	11.03	--	ND (.2506)	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1828	Station 1	8/8/95	0.12	0.00021	63.41	0.110	33.83	0.059	14.79	0.026	4.23	0.007
Q-1829	Station 2	8/8/95										
Q-1826	Station 3	8/8/95	0.46	0.00080	96.24	0.169	134.60	0.236	38.85	0.068	9.34	0.016
Q-1830	Station 4	8/8/95										
Q-1831	Station 1	8/9/95	0.02	0.00003	19.12	0.035	4.26	0.008	5.01	0.009	2.66	0.005
Q-1832	Station 2	8/9/95	0.65	0.00119	263.10	0.482	18.87	0.035	111.50	0.204	26.63	0.049
Q-1833	Station 3	8/9/95	1.13	0.00203	927.30	1.676	23.08	0.042	134.60	0.243	18.80	0.034
Q-1834	Station 4	8/9/95										
Q-1835//	Station 1	8/10/95										
Q-1836//	Station 2	8/10/95										
Q-1837//	Station 3	8/10/95										
Q-1838//	Station 4	8/10/95										
Q-1839	Station 1	8/11/95	ND(0.0125)	--	234.30	0.485	2.27	0.005	4.01	0.008	3.05	0.006
Q-1840	Station 2	8/11/95										
Q-1841	Station 3	8/11/95	0.58	0.00120	177.40	0.366	14.86	0.031	79.70	0.164	18.80	0.039
Q-1842	Station 4	8/11/95										
Q-1843	Station 1	8/14/95	0.11	0.00019	105.30	0.192	4.86	0.009	16.29	0.030	5.39	0.010
Q-1844	Station 2	8/14/95										
Q-1845	Station 3	8/14/95										
Q-1846	Station 4	8/14/95	0.42	0.00078	107.80	0.200	12.13	0.022	57.89	0.107	11.65	0.022
Q-1847//	Station 1	8/15/95										
Q-1848//	Station 2	8/15/95										
Q-1849//	Station 3	8/15/95										
Q-1850//	Station 4	8/15/95										
Blank /d/	--	--	ND(.0125)	--	ND (.2506)	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--
Blank /d/	--	--	0.19	--	0.33	--	ND (.5012)	--	ND (2.506)	--	ND (0.9398)	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1851/c/	Station 1	8/16/95	42500	449	531	80.02						
Q-1852/c/	Station 2	8/16/95	159900	453	532	300.77						
Q-1858/c/	Station 3	8/16/95	125300	460	547	228.90						
Q-1859/c/	Station 4	8/16/95	94200	470	549	171.68						
Q-1860	Station 1	8/17/95	25200	510	611	41.22	13.78	0.023	55.14	0.090	0.43	0.0007
Q-1861	Station 2	8/17/95	86200	505	593	145.25						
Q-1862	Station 3	8/17/95	183200	507	607	301.68	79.45	0.131	1050.00	1.729	1.96	0.0032
Q-1863	Station 4	8/17/95	25600	509	597	42.87						
Q-1879/d/	Station 1	8/21/95	21100	427	514	41.05						
Q-1880/b,c/	Station 2	8/21/95	61500	365	430	143.05						
Q-1881/b,c/	Station 3	8/21/95	63400	352	424	149.51						
Q-1882/c/	Station 4	8/21/95	97700	394	465	210.15						
Q-1883	Station 1	8/22/95	27800	513	606	45.84	14.03	0.023	71.93	0.119	0.50	0.0008
Q-1884	Station 2	8/22/95	69100	434	507	136.20						
Q-1885	Station 3	8/22/95	106500	422	506	210.55	40.35	0.080	438.60	0.867	0.96	0.0019
Q-1886	Station 4	8/22/95	56100	388	454	123.58						
Q-1887	Station 1	8/23/95	29900	520	616	48.57	9.02	0.015	81.70	0.133	0.39	0.0006
Q-1888	Station 2	8/23/95	122000	524	613	199.06						
Q-1889	Station 3	8/23/95	119400	520	625	191.12						
Q-1890	Station 4	8/23/95	126300	524	616	205.18	42.10	0.068	586.40	0.953	1.29	0.0021
Q-1891	Station 1	8/24/95	24300	507	602	40.39	5.51	0.009	39.85	0.066	0.27	0.0004
Q-1892	Station 2	8/24/95	66600	503	590	112.86						
Q-1893	Station 3	8/24/95	87200	500	604	144.34						
Q-1894	Station 4	8/24/95	160400	499	587	273.03	45.36	0.077	496.20	0.845	1.32	0.0022
Q-1895	Station 1	8/25/95	15800	434	515	30.66	5.01	0.010	80.45	0.156	ND (.2506)	--
Q-1896	Station 2	8/25/95	37700	443	522	72.18						
Q-1897	Station 3	8/25/95	68100	443	535	127.25						
Q-1898	Station 4	8/25/95	151100	442	522	289.44	43.61	0.084	453.60	0.869	1.18	0.0023

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1851/c/	Station 1	8/16/95										
Q-1852/c/	Station 2	8/16/95										
Q-1858/c/	Station 3	8/16/95										
Q-1859/c/	Station 4	8/16/95										
Q-1860	Station 1	8/17/95	0.14	0.00023	9.98	0.016	3.91	0.006	ND (2.506)	--	ND(0.9398)	--
Q-1861	Station 2	8/17/95										
Q-1862	Station 3	8/17/95	2.04	0.00336	330.80	0.545	39.85	0.066	210.00	0.346	8.65	0.014
Q-1863	Station 4	8/17/95										
Q-1879/d/	Station 1	8/21/95										
Q-1880/b,c/	Station 2	8/21/95										
Q-1881/b,c/	Station 3	8/21/95										
Q-1882/c/	Station 4	8/21/95										
Q-1883	Station 1	8/22/95	0.63	0.00105	11.85	0.020	5.16	0.009	ND (2.506)	--	ND(0.9398)	--
Q-1884	Station 2	8/22/95										
Q-1885	Station 3	8/22/95	0.91	0.00180	167.90	0.332	16.44	0.033	93.48	0.185	12.03	0.024
Q-1886	Station 4	8/22/95										
Q-1887	Station 1	8/23/95	0.22	0.00036	13.68	0.022	4.86	0.008	ND (2.506)	--	ND(0.9398)	--
Q-1888	Station 2	8/23/95										
Q-1889	Station 3	8/23/95										
Q-1890	Station 4	8/23/95	1.26	0.00205	215.80	0.351	21.73	0.035	109.80	0.178	12.03	0.020
Q-1891	Station 1	8/24/95	0.17	0.00028	7.07	0.012	1.93	0.003	ND (2.506)	--	ND(0.9398)	--
Q-1892	Station 2	8/24/95										
Q-1893	Station 3	8/24/95										
Q-1894	Station 4	8/24/95	1.07	0.00183	220.00	0.374	21.83	0.037	85.71	0.146	4.70	0.008
Q-1895	Station 1	8/25/95	0.10	0.00020	6.79	0.013	1.76	0.003	ND (2.506)	--	ND(0.9398)	--
Q-1896	Station 2	8/25/95										
Q-1897	Station 3	8/25/95										
Q-1898	Station 4	8/25/95	0.97	0.00187	238.60	0.457	26.06	0.050	78.19	0.150	6.39	0.012

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-1899	Station 1	8/28/95	17500	515	612	28.61	9.52	0.016	112.80	0.184	ND (2506)	--
Q-1900	Station 2	8/28/95	94700	509	599	158.17	43.61	0.073	568.90	0.950	1.35	0.0022
Q-1901	Station 3	8/28/95	73600	508	616	119.41						
Q-1902	Station 4	8/28/95	48600	505	596	81.60						
Q-1903/c/	Station 1	8/29/95	15500	493	582	26.63						
Q-1904/c/	Station 2	8/29/95	41500	489	571	72.65						
Q-1905/c/	Station 3	8/29/95	42100	489	587	71.75						
Q-1906/c/	Station 4	8/29/95	16600	488	573	28.97						
Q-1907/c/	Station 1	8/30/95	17700	491	582	30.42						
Q-1908/c/	Station 2	8/30/95	23700	503	593	39.97						
Q-1909/c/	Station 3	8/30/95	18700	508	613	30.53						
Q-1910/c/	Station 4	8/30/95	32000	509	602	53.19						
Q-1911	Station 1	8/31/95	22000	380	452	48.71	9.77	0.022	129.10	0.286	0.54	0.0012
Q-1912	Station 2	8/31/95	25100	377	446	56.31						
Q-1913	Station 3	8/31/95	28000	378	456	63.61	13.28	0.029	195.00	0.428	0.32	0.0007
Q-1914	Station 4	8/31/95	25700	376	444	57.91						
Q-1915	Station 1	9/5/95	38100	519	612	62.24	15.79	0.026	168.70	0.276	0.65	0.0011
Q-1916	Station 2	9/5/95	65100	514	605	107.65	23.81	0.039	340.80	0.564	0.70	0.0012
Q-1917	Station 3	9/5/95	38200	510	611	62.48						
Q-1918	Station 4	9/5/95	39400	510	596	66.06						
Q-1919/c/	Station 1	9/6/95	45000	434	508	88.62						
Q-1920/c/	Station 2	9/6/95	47000	431	503	93.45						
Q-1921/c/	Station 3	9/6/95	53200	429	510	104.29						
Q-1922/c/	Station 4	9/6/95	45400	426	495	91.72						
Q-1923	Station 1	9/7/95	50000	455	534	93.63	24.31	0.046	184.20	0.345	0.75	0.0014
Q-1924	Station 2	9/7/95	58000	453	528	109.84						
Q-1925	Station 3	9/7/95	62000	454	538	115.17	29.57	0.055	283.20	0.526	0.60	0.0011
Q-1926	Station 4	9/7/95	48500	452	527	92.05						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1899	Station 1	8/28/95	0.16	0.00026	11.73	0.019	3.41	0.006	ND (2.506)	--	ND(0.9398)	--
Q-1900	Station 2	8/28/95	0.97	0.00162	288.20	0.481	19.22	0.032	126.60	0.211	10.34	0.017
Q-1901	Station 3	8/28/95										
Q-1902	Station 4	8/28/95										
Q-1903/cl	Station 1	8/29/95										
Q-1904/cl	Station 2	8/29/95										
Q-1905/cl	Station 3	8/29/95										
Q-1906/cl	Station 4	8/29/95										
Q-1907/cl	Station 1	8/30/95										
Q-1908/cl	Station 2	8/30/95										
Q-1909/cl	Station 3	8/30/95										
Q-1910/cl	Station 4	8/30/95										
Q-1911	Station 1	8/31/95	0.74	0.00165	17.87	0.040	5.41	0.012	ND (2.506)	--	ND(0.9398)	--
Q-1912	Station 2	8/31/95										
Q-1913	Station 3	8/31/95	0.65	0.00142	36.34	0.080	8.30	0.018	43.61	0.096	10.24	0.022
Q-1914	Station 4	8/31/95										
Q-1915	Station 1	9/5/95	1.22	0.00199	32.83	0.054	60.65	0.099	29.57	0.048	ND(0.9398)	--
Q-1916	Station 2	9/5/95	1.16	0.00192	59.90	0.099	23.86	0.039	84.21	0.139	12.03	0.020
Q-1917	Station 3	9/5/95										
Q-1918	Station 4	9/5/95										
Q-1919/cl	Station 1	9/6/95										
Q-1920/cl	Station 2	9/6/95										
Q-1921/cl	Station 3	9/6/95										
Q-1922/cl	Station 4	9/6/95										
Q-1923	Station 1	9/7/95	0.54	0.00102	37.84	0.071	92.48	0.173	14.29	0.027	1.74	0.003
Q-1924	Station 2	9/7/95										
Q-1925	Station 3	9/7/95	0.73	0.00135	63.66	0.118	56.14	0.104	47.37	0.088	4.70	0.009
Q-1926	Station 4	9/7/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-1927	Station 1	9/8/95	29900	428	505	59.17	14.29	0.028	45.61	0.090	0.27	0.0005
Q-1928	Station 2	9/8/95	48500	435	513	94.59						
Q-1929	Station 3	9/8/95	108500	439	525	206.64	39.35	0.075	929.80	1.771	7.49	0.0143
Q-1930	Station 4	9/8/95	99500	440	516	192.85						
Blank /d/	--	--	--	--	--	--	17.79	--	4.01	--	ND (.2506)	--
Q-1931	Station 1	9/11/95	20200	439	524	38.57	19.8	0.038	47.6	0.091	0.41	0.0008
Q-1932	Station 2	9/11/95	29200	437	517	56.44						
Q-1933	Station 3	9/11/95	48300	442	532	90.73	20.8	0.039	82.7	0.155	0.71	0.0013
Q-1934	Station 4	9/11/95	39700	441	520	76.31						
Q-1935/c/	Station 1	9/12/95	23200	452	539	43.01						
Q-1936/b,c/	Station 2	9/12/95	19600	214	253	77.42						
Q-1937/c/	Station 3	9/12/95	29900	460	568	52.69						
Q-1938/c/	Station 4	9/12/95	49800	465	550	90.52						
Q-1939/c/	Station 1	9/13/95	19300	350	416	46.41						
Q-1940/c/	Station 2	9/13/95	29400	345	408	72.10						
Q-1941/c/	Station 3	9/13/95	23800	347	419	56.79						
Q-1942/c/	Station 4	9/13/95	21700	350	413	52.50						
Q-1943	Station 1	9/14/95	20800	460	545	38.20	15.3	0.028	51.9	0.095	0.34	0.0006
Q-1944	Station 2	9/14/95	48400	453	532	91.04						
Q-1945	Station 3	9/14/95	48500	454	548	88.46						
Q-1946	Station 4	9/14/95	105000	449	529	198.57	29.1	0.055	263.0	0.497	0.81	0.0015
Q-1947/c/	Station 1	9/18/95	23100	338	394	58.66						
Q-1948/c/	Station 2	9/18/95	25800	339	394	65.50						
Q-1949/c/	Station 3	9/18/95	23700	339	401	59.14						
Q-1950/c/	Station 4	9/18/95	33400	344	399	83.63						
Q-1951	Station 1	9/19/95	48100	426	496	97.01	27.1	0.055	172.0	0.347	1.84	0.0037
Q-1952	Station 2	9/19/95	42400	428	496	85.41						
Q-1953	Station 3	9/19/95	54100	433	513	105.44	29.8	0.058	129.0	0.251	1.32	0.0026
Q-1954	Station 4	9/19/95	44300	435	504	87.88						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1927	Station 1	9/8/95	0.25	0.00050	9.07	0.018	3.53	0.007	ND (2.506)	--	ND(0.9398)	--
Q-1928	Station 2	9/8/95										
Q-1929	Station 3	9/8/95	1.60	0.00305	716.80	1.365	28.57	0.054	103.50	0.197	9.40	0.018
Q-1930	Station 4	9/8/95										
Blank /d/	--	--	ND(.0125)	--	0.35	--	ND (.5012)	--	6.02	--	ND (0.9398)	--
Q-1931	Station 1	9/11/95	0.25	0.0005	19.2	0.037	5.46	0.010	4.76	0.009	1.47	0.003
Q-1932	Station 2	9/11/95										
Q-1933	Station 3	9/11/95	0.71	0.0013	82.7	0.155	7.09	0.013	33.30	0.063	8.43	0.016
Q-1934	Station 4	9/11/95										
Q-1935/c/	Station 1	9/12/95										
Q-1936/b,c/	Station 2	9/12/95										
Q-1937/c/	Station 3	9/12/95										
Q-1938/c/	Station 4	9/12/95										
Q-1939/c/	Station 1	9/13/95										
Q-1940/c/	Station 2	9/13/95										
Q-1941/c/	Station 3	9/13/95										
Q-1942/c/	Station 4	9/13/95										
Q-1943	Station 1	9/14/95	0.54	0.0010	18.6	0.034	3.66	0.007	4.51	0.008	ND(0.94)	--
Q-1944	Station 2	9/14/95										
Q-1945	Station 3	9/14/95										
Q-1946	Station 4	9/14/95	0.62	0.0012	158.0	0.299	13.20	0.025	45.90	0.087	7.64	0.014
Q-1947/c/	Station 1	9/18/95										
Q-1948/c/	Station 2	9/18/95										
Q-1949/c/	Station 3	9/18/95										
Q-1950/c/	Station 4	9/18/95										
Q-1951	Station 1	9/19/95	0.73	0.0015	714.0	1.440	16.00	0.032	10.00	0.020	1.08	0.002
Q-1952	Station 2	9/19/95										
Q-1953	Station 3	9/19/95	0.61	0.0012	331.0	0.645	16.50	0.032	18.30	0.036	1.47	0.003
Q-1954	Station 4	9/19/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-1955	Station 1	9/20/95	26900	401	474	56.71	23.1	0.049	49.6	0.105	0.41	0.0009
Q-1956	Station 2	9/20/95	41500	395	468	88.74						
Q-1957	Station 3	9/20/95	58100	395	476	122.12	31.6	0.066	145.0	0.305	0.58	0.0012
Q-1958	Station 4	9/20/95	55100	396	466	118.35						
Q-1959/c/	Station 1	9/21/95	16200	382	452	35.81						
Q-1960/c/	Station 2	9/21/95	21300	377	446	47.80						
Q-1961/c/	Station 3	9/21/95	25300	373	447	56.54						
Q-1962/c/	Station 4	9/21/95	26700	370	435	61.37						
Q-1963/c/	Station 1	9/22/95	15500	316	374	41.39						
Q-1964/c/	Station 2	9/22/95	17400	317	376	46.32						
Q-1965/c/	Station 3	9/22/95	25400	318	382	66.47						
Q-1966/c/	Station 4	9/22/95	22900	315	371	61.67						
Blank /d/	--	--	--	--	--	--	16.8	--	5.5	--	ND (0.25)	--
Q-1967	Station 1	9/25/95	31100	444	525	59.21	17.3	0.033	66.7	0.127	ND (0.25)	--
Q-1968	Station 2	9/25/95	44700	440	517	86.54						
Q-1969	Station 3	9/25/95	55600	443	529	105.09						
Q-1970	Station 4	9/25/95	81500	450	526	154.82	27.8	0.053	243.0	0.462	0.61	0.0012
Q-1971	Station 1	9/26/95	33300	449	528	63.08	9.5	0.018	61.2	0.116	ND (0.25)	--
Q-1972	Station 2	9/26/95	26800	447	521	51.44						
Q-2187	Station 3	9/26/95	26800	448	545	49.22						
Q-2188	Station 4	9/26/95	51000	449	523	97.45	5.5	0.011	133.0	0.254	0.59	0.0011
Q-2189/c/	Station 1	9/27/95	20900	473	555	37.65						
Q-2190/c/	Station 2	9/27/95	22100	470	549	40.28						
Q-2191/c/	Station 3	9/27/95	28100	470	561	50.11						
Q-2192/c/	Station 4	9/27/95	49200	473	552	89.17						
Q-2193	Station 1	9/28/95	66500	427	501	132.85	9.0	0.018	95.0	0.190	0.32	0.0006
Q-2194	Station 2	9/28/95	85000	416	483	175.83						
Q-2195	Station 3	9/28/95	48800	417	499	97.87						
Q-2196	Station 4	9/28/95	117700	417	486	242.04	29.3	0.060	222.0	0.457	0.92	0.0019

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-1955	Station 1	9/20/95	0.18	0.0004	12.5	0.026	2.58	0.005	3.51	0.007	ND(0.94)	--
Q-1956	Station 2	9/20/95										
Q-1957	Station 3	9/20/95	0.41	0.0009	75.2	0.158	6.17	0.013	28.60	0.060	8.05	0.017
Q-1958	Station 4	9/20/95										
Q-1959/c/	Station 1	9/21/95										
Q-1960/c/	Station 2	9/21/95										
Q-1961/c/	Station 3	9/21/95										
Q-1962/c/	Station 4	9/21/95										
Q-1963/c/	Station 1	9/22/95										
Q-1964/c/	Station 2	9/22/95										
Q-1965/c/	Station 3	9/22/95										
Q-1966/c/	Station 4	9/22/95										
Blank /d/	--	--	0.02	--	0.33	--	ND (0.50)	--	ND(2.51)		ND(0.94)	--
Q-1967	Station 1	9/25/95	0.32	0.0006	14.5	0.028	2.46	0.005	3.26	0.006	ND(0.94)	--
Q-1968	Station 2	9/25/95										
Q-1969	Station 3	9/25/95										
Q-1970	Station 4	9/25/95	0.88	0.0017	90.7	0.172	11.00	0.021	32.30	0.061	3.98	0.008
Q-1971	Station 1	9/26/95	0.14	0.0003	34.1	0.065	25.10	0.048	7.02	0.013	1.78	0.003
Q-1972	Station 2	9/26/95										
Q-2187	Station 3	9/26/95										
Q-2188	Station 4	9/26/95	0.53	0.0010	67.2	0.128	14.30	0.027	25.30	0.048	2.66	0.005
Q-2189/c/	Station 1	9/27/95										
Q-2190/c/	Station 2	9/27/95										
Q-2191/c/	Station 3	9/27/95										
Q-2192/c/	Station 4	9/27/95										
Q-2193	Station 1	9/28/95	0.29	0.0006	34.6	0.069	7.62	0.015	7.52	0.015	ND(0.94)	--
Q-2194	Station 2	9/28/95										
Q-2195	Station 3	9/28/95										
Q-2196	Station 4	9/28/95	0.78	0.0016	124.0	0.255	16.80	0.035	40.60	0.083	2.66	0.005

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2197/c/	Station 1	10/2/95	40400	381	444	91.05						
Q-2198/c/	Station 2	10/2/95	33800	376	437	77.39						
Q-2199/c/	Station 3	10/2/95	36900	373	441	83.72						
Q-2200/c/	Station 4	10/2/95	36200	374	434	83.40						
Q-2201	Station 1	10/3/95	50700	505	594	85.32	7.3	0.012	66.4	0.112	0.43	0.0007
Q-2202	Station 2	10/3/95	48000	525	616	77.97						
Q-2203	Station 3	10/3/95	53700	528	633	84.90						
Q-2204	Station 4	10/3/95	74800	530	621	120.46	16.5	0.027	157.0	0.253	0.44	0.0007
Q-2205	Station 1	10/4/95	68100	422	487	139.73	11.5	0.024	55.4	0.114	0.53	0.0011
Q-2206/e/	Station 2	10/4/95	--	--	--	--						
Q-2207	Station 3	10/4/95	70100	407	479	146.46	9.5	0.020	67.2	0.140	0.44	0.0009
Q-2208	Station 4	10/4/95	50100	405	465	107.77						
Q-2209/c/	Station 1	10/5/95	44400	511	589	75.34						
Q-2210/c/	Station 2	10/5/95	47000	511	588	79.89						
Q-2211/c/	Station 3	10/5/95	60000	513	599	100.10						
Q-2212/c/	Station 4	10/5/95	40800	512	586	69.58						
Q-2213	Station 1	10/6/95	40000	302	356	112.51	26.3	0.074	45.1	0.127	0.52	0.0015
Q-2214	Station 2	10/6/95	33100	308	363	91.29						
Q-2215	Station 3	10/6/95	38700	309	369	104.93	20.6	0.056	58.1	0.158	0.38	0.0010
Q-2216	Station 4	10/6/95	35400	309	362	97.83						
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Q-2217	Station 1	10/10/95	30000	435	511	58.71	8.5	0.017	84.5	0.165	0.69	0.0014
Q-2218	Station 2	10/10/95	28700	438	515	55.68						
Q-2219	Station 3	10/10/95	28400	429	512	55.49						
Q-2220	Station 4	10/10/95	29400	430	503	58.51	4.8	0.009	59.4	0.118	0.57	0.0011
Q-2221/c/	Station 1	10/11/95	19600	407	481	40.73						
Q-2222/c/	Station 2	10/11/95	16300	387	467	34.92						
Q-2223/c/	Station 3	10/11/95	15800	385	462	34.17						
Q-2224/c/	Station 4	10/11/95	24000	384	453	53.00						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2197/c/	Station 1	10/2/95										
Q-2198/c/	Station 2	10/2/95										
Q-2199/c/	Station 3	10/2/95										
Q-2200/c/	Station 4	10/2/95										
Q-2201	Station 1	10/3/95	0.17	0.0003	18.5	0.031	3.91	0.007	4.76	0.008	ND(0.94)	--
Q-2202	Station 2	10/3/95										
Q-2203	Station 3	10/3/95										
Q-2204	Station 4	10/3/95	0.63	0.0010	61.7	0.099	9.57	0.015	24.30	0.039	ND(0.94)	--
Q-2205	Station 1	10/4/95	0.18	0.0004	13.9	0.029	9.47	0.019	9.27	0.019	1.34	0.003
Q-2206/e/	Station 2	10/4/95										
Q-2207	Station 3	10/4/95	0.08	0.0002	25.1	0.052	12.90	0.027	16.50	0.034	1.34	0.003
Q-2208	Station 4	10/4/95										
Q-2209/c/	Station 1	10/5/95										
Q-2210/c/	Station 2	10/5/95										
Q-2211/c/	Station 3	10/5/95										
Q-2212/c/	Station 4	10/5/95										
Q-2213	Station 1	10/6/95	0.11	0.0003	11.9	0.033	6.94	0.020	5.51	0.015	1.78	0.005
Q-2214	Station 2	10/6/95										
Q-2215	Station 3	10/6/95	0.11	0.0003	15.2	0.041	5.64	0.015	7.27	0.020	ND(0.94)	--
Q-2216	Station 4	10/6/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Q-2217	Station 1	10/10/95	0.32	0.0006	14.7	0.029	7.49	0.015	ND(2.51)	--	ND(0.94)	--
Q-2218	Station 2	10/10/95										
Q-2219	Station 3	10/10/95										
Q-2220	Station 4	10/10/95	0.42	0.0008	13.7	0.027	8.07	0.016	6.52	0.013	1.15	0.002
Q-2221/c/	Station 1	10/11/95										
Q-2222/c/	Station 2	10/11/95										
Q-2223/c/	Station 3	10/11/95										
Q-2224/c/	Station 4	10/11/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-2225	Station 1	10/12/95	25200	463	546	46.13	7.8	0.014	30.6	0.056	0.62	0.0011
Q-2226	Station 2	10/12/95	22300	463	545	40.93						
Q-2227	Station 3	10/12/95	19000	461	552	34.42	6.8	0.012	34.6	0.063	0.37	0.0007
Q-2228	Station 4	10/12/95	21200	459	538	39.38						
Q-2229/c/	Station 1	10/16/95	21400	455	541	39.59						
Q-2230/c/	Station 2	10/16/95	17300	450	534	32.39						
Q-2231/c/	Station 3	10/16/95	21500	453	546	39.36						
Q-2232/c/	Station 4	10/16/95	33600	453	534	62.87						
Q-2233	Station 1	10/17/95	25300	431	509	49.66	13.5	0.026	49.6	0.097	0.41	0.0008
Q-2234	Station 2	10/17/95	26100	422	497	52.51						
Q-2235	Station 3	10/17/95	39000	420	504	77.41	14.8	0.029	117.0	0.232	0.63	0.0013
Q-2659	Station 4	10/17/95	26100	418	490	53.24						
Q-2660/c/	Station 1	10/18/95	33800	420	497	68.04						
Q-2661/c/	Station 2	10/18/95	26800	409	480	55.88						
Q-2662/c/	Station 3	10/18/95	25700	408	491	52.36						
Q-2663/c/	Station 4	10/18/95	28700	409	482	59.59						
Q-2664	Station 1	10/19/95	48800	338	402	121.47	11.5	0.029	80.2	0.200	0.92	0.0023
Q-2665	Station 2	10/19/95	46800	337	398	117.65						
Q-2666	Station 3	10/19/95	36000	338	406	88.62						
Q-2667	Station 4	10/19/95	57900	340	397	145.90	42.4	0.107	121.0	0.305	0.79	0.0020
Q-2668	Station 1	10/20/95	21800	326	387	56.36	18.8	0.049	29.8	0.077	0.44	0.0011
Q-2669	Station 2	10/20/95	18200	326	390	46.64						
Q-2670	Station 3	10/20/95	16600	328	399	41.63						
Q-2671	Station 4	10/20/95	16400	329	391	41.90	ND(2.51)	--	46.1	0.118	0.36	0.0009
Q-2672/c/	Station 1	10/23/95	36300	428	510	71.21						
Q-2673/c/	Station 2	10/23/95	31000	424	502	61.76						
Q-2674/c/	Station 3	10/23/95	30900	425	515	59.96						
Q-2675/c/	Station 4	10/23/95	34800	421	497	70.01						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2225	Station 1	10/12/95	0.20	0.0004	7.9	0.014	2.98	0.005	ND(2.51)	--	ND(0.94)	--
Q-2226	Station 2	10/12/95										
Q-2227	Station 3	10/12/95	0.24	0.0004	9.6	0.017	2.18	0.004	ND(2.51)	--	ND(0.94)	--
Q-2228	Station 4	10/12/95										
Q-2229/c/	Station 1	10/16/95										
Q-2230/c/	Station 2	10/16/95										
Q-2231/c/	Station 3	10/16/95										
Q-2232/c/	Station 4	10/16/95										
Q-2233	Station 1	10/17/95	0.32	0.0006	7.6	0.015	3.18	0.006	ND(2.51)	--	ND(0.94)	--
Q-2234	Station 2	10/17/95										
Q-2235	Station 3	10/17/95	0.95	0.0019	29.1	0.058	11.50	0.023	5.01	0.010	1.60	0.003
Q-2659	Station 4	10/17/95										
Q-2660/c/	Station 1	10/18/95										
Q-2661/c/	Station 2	10/18/95										
Q-2662/c/	Station 3	10/18/95										
Q-2663/c/	Station 4	10/18/95										
Q-2664	Station 1	10/19/95	0.32	0.0008	42.6	0.106	9.65	0.024	9.52	0.024	2.49	0.006
Q-2665	Station 2	10/19/95										
Q-2666	Station 3	10/19/95										
Q-2667	Station 4	10/19/95	0.41	0.0010	53.1	0.134	31.30	0.079	29.60	0.075	4.70	0.012
Q-2668	Station 1	10/20/95	0.15	0.0004	6.9	0.018	1.99	0.005	ND(2.51)	--	2.49	0.006
Q-2669	Station 2	10/20/95										
Q-2670	Station 3	10/20/95										
Q-2671	Station 4	10/20/95	0.18	0.0005	6.2	0.016	2.68	0.007	4.76	0.012	1.60	0.004
Q-2672/c/	Station 1	10/23/95										
Q-2673/c/	Station 2	10/23/95										
Q-2674/c/	Station 3	10/23/95										
Q-2675/c/	Station 4	10/23/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2676	Station 1	10/24/95	39200	458	548	71.57	ND(2.51)	--	70.7	0.129	0.67	0.0012
Q-2677	Station 2	10/24/95	32600	458	546	59.72						
Q-2678	Station 3	10/24/95	34800	457	554	62.80	ND(2.51)	--	55.6	0.100	0.62	0.0011
--	Station 4	10/24/95	--	--	--	--						
Q-2689/c/	Station 1	10/25/95	12600	427	513	24.56						
Q-2690/c/	Station 2	10/25/95	16200	424	506	32.00						
Q-2691/c/	Station 3	10/25/95	15200	425	519	29.31						
Q-2692/c/	Station 4	10/25/95	19200	423	506	37.95						
Q-2693	Station 1	10/26/95	16100	254	306	52.58	ND(2.51)	--	38.8	0.127	0.45	0.0015
Q-2694	Station 2	10/26/95	18500	255	305	60.70	20.3	0.067	35.6	0.117	ND(0.25)	--
Q-2695	Station 3	10/26/95	14500	255	312	46.44						
Q-2696	Station 4	10/26/95	15800	255	305	51.84						
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Blank /d/	--	--	--	--	--	--	22.1	--	6.3	--	ND (0.25)	--
Q-2697	Station 1	11/3/95	31700	319	384	82.46	8.02	0.021	47.4	0.123	0.79	0.0021
Q-2698	Station 2	11/3/95	28100	320	384	73.12	8.27	0.022	36.8	0.096	0.57	0.0015
Q-2699	Station 3	11/3/95	30100	315	385	78.20						
Q-2700	Station 4	11/3/95	30400	316	377	80.66						
Q-2701	Station 1	11/6/95	80000	505	609	131.31	27.80	0.046	416.0	0.683	0.88	0.0014
Q-2702	Station 2	11/6/95	43700	503	602	72.58						
Q-2703	Station 3	11/6/95	46200	499	609	75.89						
Q-2704	Station 4	11/6/95	29400	498	596	49.36	11.30	0.019	53.6	0.090	0.59	0.0010
Q-2705/c/	Station 1	11/7/95	55200	488	585	94.34						
Q-2706/c/	Station 2	11/7/95	39800	490	585	68.03						
Q-2707/c/	Station 3	11/7/95	42500	491	595	71.39						
Q-2708/c/	Station 4	11/7/95	38800	492	585	66.34						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2676	Station 1	10/24/95	0.24	0.0004	16.8	0.031	6.06	0.011	4.76	0.009	2.04	0.004
Q-2677	Station 2	10/24/95										
Q-2678	Station 3	10/24/95	0.22	0.0004	17.7	0.032	7.17	0.013	6.52	0.012	5.58	0.010
--	Station 4	10/24/95										
Q-2689/c/	Station 1	10/25/95										
Q-2690/c/	Station 2	10/25/95										
Q-2691/c/	Station 3	10/25/95										
Q-2692/c/	Station 4	10/25/95										
Q-2693	Station 1	10/26/95	0.26	0.0008	817.0	2.668	25.10	0.082	3.01	0.010	3.35	0.011
Q-2694	Station 2	10/26/95	0.31	0.0010	40.9	0.134	13.50	0.044	13.30	0.044	2.93	0.010
Q-2695	Station 3	10/26/95										
Q-2696	Station 4	10/26/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	0.97	--	ND(2.51)	--	ND(0.94)	--
Q-2697	Station 1	11/3/95	0.31	0.0008	10.7	0.028	4.86	0.013	4.26	0.011	ND(0.94)	--
Q-2698	Station 2	11/3/95	0.49	0.0013	10.4	0.027	5.11	0.013	4.26	0.011	ND(0.94)	--
Q-2699	Station 3	11/3/95										
Q-2700	Station 4	11/3/95										
Q-2701	Station 1	11/6/95	0.77	0.0013	138.0	0.227	20.40	0.033	100.00	0.164	9.96	0.016
Q-2702	Station 2	11/6/95										
Q-2703	Station 3	11/6/95										
Q-2704	Station 4	11/6/95	0.52	0.0009	17.2	0.029	16.70	0.028	34.80	0.058	ND(0.94)	--
Q-2705/c/	Station 1	11/7/95										
Q-2706/c/	Station 2	11/7/95										
Q-2707/c/	Station 3	11/7/95										
Q-2708/c/	Station 4	11/7/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
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Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2709/cl	Station 1	11/8/95	67200	492	591	113.75						
Q-2710/cl	Station 2	11/8/95	79100	492	589	134.35						
Q-2711/cl	Station 3	11/8/95	109800	492	598	183.64						
Q-2712/cl	Station 4	11/8/95	66300	494	589	112.64						
Q-2713	Station 1	11/9/95	32800	506	607	54.06	13.30	0.022	68.7	0.113	0.48	0.0008
Q-2714	Station 2	11/9/95	74400	503	600	124.00						
Q-2715	Station 3	11/9/95	203700	366	446	457.05	65.20	0.146	657.0	1.474	1.77	0.0040
Q-2716	Station 4	11/9/95	219600	360	428	513.61	62.40	0.146	554.0	1.296	6.12	0.0143
Q-2717	Station 1	11/13/95	59100	405	485	121.83	30.10	0.062	162.0	0.334	1.16	0.0024
Q-2718	Station 2	11/13/95	39700	403	481	82.53						
Q-2719	Station 3	11/13/95	75100	402	489	153.46	33.80	0.069	215.0	0.439	1.14	0.0023
Q-2720	Station 4	11/13/95	53700	404	480	111.84						
Q-2721/cl	Station 1	11/14/95	33000	422	505	65.34						
Q-2722/cl	Station 2	11/14/95	54700	419	501	109.27						
Q-2723/cl	Station 3	11/14/95	47400	422	513	92.41						
Q-2724/cl	Station 4	11/14/95	52900	422	502	105.48						
Q-2725	Station 1	11/15/95	18600	542	653	28.49	11.80	0.018	55.4	0.085	0.46	0.0007
Q-2726	Station 2	11/15/95	17700	304	364	48.59						
Q-2727	Station 3	11/15/95	34800	267	326	106.91						
Q-2728	Station 4	11/15/95	94200	266	318	296.31	30.80	0.097	249.0	0.783	1.87	0.0059
Q-2729	Station 1	11/16/95	31700	416	500	63.42	14.80	0.030	136.0	0.272	0.57	0.0011
Q-2730	Station 2	11/16/95	31900	414	494	64.63						
Q-2731	Station 3	11/16/95	82400	419	510	161.72	27.10	0.053	356.0	0.699	1.04	0.0020
Q-2732	Station 4	11/16/95	76300	418	497	153.37						
Q-2733/cl	Station 1	11/17/95	14300	348	419	34.14						
Q-2734/cl	Station 2	11/17/95	24800	344	413	60.10						
Q-2735/cl	Station 3	11/17/95	32000	343	419	76.32						
Q-2736/cl	Station 4	11/17/95	25100	342	408	61.45						

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2709/cl	Station 1	11/8/95										
Q-2710/cl	Station 2	11/8/95										
Q-2711/cl	Station 3	11/8/95										
Q-2712/cl	Station 4	11/8/95										
Q-2713	Station 1	11/9/95	0.34	0.0006	164.0	0.270	19.30	0.032	7.02	0.012	ND(0.94)	--
Q-2714	Station 2	11/9/95										
Q-2715	Station 3	11/9/95	1.85	0.0042	378.0	0.848	15.40	0.035	109.00	0.245	11.70	0.026
Q-2716	Station 4	11/9/95	1.24	0.0029	333.0	0.779	18.10	0.042	99.50	0.233	15.80	0.037
Q-2717	Station 1	11/13/95	0.54	0.0011	296.0	0.610	19.40	0.040	31.80	0.066	2.51	0.005
Q-2718	Station 2	11/13/95										
Q-2719	Station 3	11/13/95	0.67	0.0014	105.0	0.215	17.80	0.036	44.40	0.091	5.33	0.011
Q-2720	Station 4	11/13/95										
Q-2721/cl	Station 1	11/14/95										
Q-2722/cl	Station 2	11/14/95										
Q-2723/cl	Station 3	11/14/95										
Q-2724/cl	Station 4	11/14/95										
Q-2725	Station 1	11/15/95	0.15	0.0002	331.0	0.507	5.14	0.008	4.01	0.006	ND(0.94)	--
Q-2726	Station 2	11/15/95										
Q-2727	Station 3	11/15/95										
Q-2728	Station 4	11/15/95	0.50	0.0016	466.0	1.466	12.60	0.040	43.90	0.138	5.01	0.016
Q-2729	Station 1	11/16/95	0.24	0.0005	70.2	0.140	17.00	0.034	16.50	0.033	ND(0.94)	--
Q-2730	Station 2	11/16/95										
Q-2731	Station 3	11/16/95	1.83	0.0036	469.0	0.920	127.00	0.249	59.60	0.117	4.70	0.009
Q-2732	Station 4	11/16/95										
Q-2733/cl	Station 1	11/17/95										
Q-2734/cl	Station 2	11/17/95										
Q-2735/cl	Station 3	11/17/95										
Q-2736/cl	Station 4	11/17/95										

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m³)	Particulate Concentration (µg/m³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m³)
Q-2737/c/	Station 1	11/20/95										
Q-2738/c/	Station 2	11/20/95										
Q-2739/c/	Station 3	11/20/95										
Q-2740/c/	Station 4	11/20/95										
Q-2741	Station 1	11/21/95	66000	570	686	96.14	17.00	0.025	281.0	0.409	11.50	0.0168
Q-2742	Station 2	11/21/95	25900	573	685	37.79	10.00	0.015	69.2	0.101	1.32	0.0019
Q-2743	Station 3	11/21/95	39800	573	698	57.03						
Q-2744	Station 4	11/21/95	27600	561	669	41.24						
Q-2745/c/	Station 1	11/22/95	53500	500	602	88.80						
Q-2746/c/	Station 2	11/22/95	14100	248	297	47.51						
Q-2747/c/	Station 3	11/22/95	21700	248	302	71.75						
Q-2748/c/	Station 4	11/22/95	59700	500	597	100.04						
Q-2749	Station 1	11/24/95	53300	499	605	88.04	9.77	0.016	102.0	0.168	4.31	0.0071
Q-2750	Station 2	11/24/95	38800	496	590	65.71						
Q-2751	Station 3	11/24/95	104300	495	605	172.49	24.60	0.041	331.0	0.547	1.49	0.0025
Q-2752	Station 4	11/24/95	62100	495	593	104.65						
Blank /d/	--	--	--	--	--	--	10.50	--	ND (1.25)	--	ND (0.25)	--
Q-2753	Station 1	11/27/95	68200	615	741	92.03	42.60	0.057	176.0	0.237	2.07	0.0028
Q-2754	Station 2	11/27/95	116900	615	738	158.43						
Q-2755	Station 3	11/27/95	153000	613	749	204.32	123.00	0.164	328.0	0.438	9.82	0.0131
Q-2756	Station 4	11/27/95	44700	602	717	62.32						
Q-2757/c/	Station 1	11/28/95	45400	536	646	70.26						
Q-2758/c/	Station 2	11/28/95	41200	535	642	64.15						
Q-2759/c/	Station 3	11/28/95	42400	539	658	64.45						
Q-2760/c/	Station 4	11/28/95	29900	539	643	46.53						
Q-2761	Station 1	11/29/95	57200	553	665	86.04	52.10	0.078	133.0	0.200	0.71	0.0011
Q-2762	Station 2	11/29/95	42800	553	664	64.43						
Q-2763	Station 3	11/29/95	57600	553	676	85.24						
Q-2764	Station 4	11/29/95	37800	553	656	57.60	23.60	0.036	70.7	0.108	0.54	0.0008

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2737/c/	Station 1	11/20/95										
Q-2738/c/	Station 2	11/20/95										
Q-2739/c/	Station 3	11/20/95										
Q-2740/c/	Station 4	11/20/95										
Q-2741	Station 1	11/21/95	0.77	0.0011	286.0	0.417	23.80	0.035	48.90	0.071	ND(0.94)	--
Q-2742	Station 2	11/21/95	0.27	0.0004	22.0	0.032	29.10	0.042	10.00	0.015	ND(0.94)	--
Q-2743	Station 3	11/21/95										
Q-2744	Station 4	11/21/95										
Q-2745/c/	Station 1	11/22/95										
Q-2746/c/	Station 2	11/22/95										
Q-2747/c/	Station 3	11/22/95										
Q-2748/c/	Station 4	11/22/95										
Q-2749	Station 1	11/24/95	0.32	0.0005	62.7	0.104	15.50	0.026	29.30	0.048	ND(0.94)	--
Q-2750	Station 2	11/24/95										
Q-2751	Station 3	11/24/95	0.47	0.0008	96.7	0.160	18.60	0.031	98.70	0.163	ND(0.94)	--
Q-2752	Station 4	11/24/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	ND (0.50)	--	ND(2.51)	--	2.19	--
Q-2753	Station 1	11/27/95	0.40	0.0005	43.6	0.059	7.92	0.011	78.70	0.106	ND(0.94)	--
Q-2754	Station 2	11/27/95										
Q-2755	Station 3	11/27/95	0.70	0.0009	128.0	0.171	19.30	0.026	148.00	0.198	ND(0.94)	--
Q-2756	Station 4	11/27/95										
Q-2757/c/	Station 1	11/28/95										
Q-2758/c/	Station 2	11/28/95										
Q-2759/c/	Station 3	11/28/95										
Q-2760/c/	Station 4	11/28/95										
Q-2761	Station 1	11/29/95	0.43	0.0006	30.8	0.046	14.50	0.022	31.10	0.047	ND(0.94)	--
Q-2762	Station 2	11/29/95										
Q-2763	Station 3	11/29/95										
Q-2764	Station 4	11/29/95	0.40	0.0006	19.8	0.030	31.60	0.048	37.60	0.057	ND(0.94)	--

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Mass of Particulates on Filter (µg)	Run Time (minutes)	Corrected Sample Volume (m ³)	Particulate Concentration (µg/m ³)	Total Barium on filter (µg)	Airborne Barium Concentration (µg/m ³)	Total Zinc on filter (µg)	Airborne Zinc Concentration (µg/m ³)	Total Arsenic on filter (µg)	Airborne Arsenic Concentration (µg/m ³)
Q-2950	Station 1	12/1/95	27200	397	475	57.27	13.30	0.028	120.0	0.253	ND(0.25)	--
Q-2951	Station 2	12/1/95	32700	395	469	69.68						
Q-2952	Station 3	12/1/95	129100	392	483	267.40	54.40	0.113	1700.0	3.521	2.36	0.0049
Q-2953	Station 4	12/1/95	11200	389	463	24.19						
Q-2954/c/	Station 1	12/14/95	32800	469	569	57.60						
Q-2955/c/	Station 2	12/14/95	24200	449	543	44.55						
Q-2956/c/	Station 3	12/14/95	21700	448	552	39.31						
--/g/	Station 4	12/14/95	--	--	--	--						
Blank /d/	--	--	--	--	--	--	8.27	--	ND (1.25)	--	ND (0.25)	--

PROJECT TO DATE:

Mean Concentration:	83.57	--	0.041	--	0.331	--	0.0016
Standard Deviation:	73.94	--	0.041	--	0.501	--	0.0023

REPORTING PERIOD

7/24/95 - 12/14/95:

Mean Concentration:	95.82	--	0.048	--	0.403	--	0.0022
Standard Deviation:	69.78	--	0.035	--	0.511	--	0.0030

ND Not detected.

/a/ Particulate concentrations could not be calculated because filters from a previous project were used and therefore could not be weighed by the laboratory.

/b/ Sample not collected due to sampler malfunction.

/c/ Metals analysis not performed for these samples because they were grouped with another day's sample, some of which were selected for analysis, in accordance with air monitoring plan goal of limiting analysis to 25% of samples collected.

/d/ Only total mass of metals reported because blank filters are laboratory blanks.

/e/ Sample duration and particulate concentration could not be determined due to interruption of power supply to samplers.

/f/ Metals analysis not performed for these samples because they were grouped with another day's sample, some of which were selected for analysis, in accordance with air monitoring plan goal of limiting analysis to 25% of samples collected.

/g/ Station 4 not operated due to storm damage.

**Table 4. Ambient Air Monitoring Results, Total Particulates and Metals
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Filter Number	Location	Sampling Period	Total Cadmium on filter (µg)	Airborne Cadmium Concentration (µg/m³)	Total Lead on filter (µg)	Airborne Lead Concentration (µg/m³)	Total Nickel on filter (µg)	Airborne Nickel Concentration (µg/m³)	Total Chromium on filter (µg)	Airborne Chromium Concentration (µg/m³)	Total Hexavalent Chromium on filter (µg)	Airborne Hexavalent Chromium Concentration (µg/m³)
Q-2950	Station 1	12/1/95	0.32	0.0007	105.0	0.221	21.10	0.044	38.60	0.081	ND(0.94)	--
Q-2951	Station 2	12/1/95										
Q-2952	Station 3	12/1/95	2.61	0.0054	947.0	1.962	36.80	0.076	293.00	0.607	2.76	0.006
Q-2953	Station 4	12/1/95										
Q-2954/cl	Station 1	12/14/95										
Q-2955/cl	Station 2	12/14/95										
Q-2956/cl	Station 3	12/14/95										
--/g/	Station 4	12/14/95										
Blank /d/	--	--	ND (0.01)	--	ND (0.25)	--	ND (0.50)	--	ND(2.51)	--	1.93	--
PROJECT TO DATE:												
Mean Concentration:	--		--	0.0009	--	0.168	--	0.022	--	0.061	--	0.013
Standard Deviation:	--		--	0.0010	--	0.342	--	0.031	--	0.099	--	0.011
REPORTING PERIOD												
7/24/95 - 12/14/95:												
Mean Concentration:	--		--	0.0011	--	0.268	--	0.032	--	0.080	--	0.012
Standard Deviation:	--		--	0.0009	--	0.449	--	0.040	--	0.095	--	0.010

**Table 7. Analytical Data Summary for Water Generated During Removal Activity
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Source:	Discharge Permit #1 60,000 gallons collected rainwater	Discharge Permit #2 60,000 gallons collected rainwater	Discharge Permit #3 100,000 gallons collected rainwater	Discharge Permit #4 40,000 gallons collected rainwater	Discharge Permit #5 20,000 gallons of rainwater collected in containment vault	Containment vault, Pickling Tanks, Rectangular AAST, and Steel Racks Rinse Water (1,000 gallons) Not Sampled*
Sample Date:	1/18/95 + 1/13/95	3/7/95	3/15/95 + 3/16/95	5/16/95	1/18/96	NA
Report Date:	1/31/95 + 1/20/95	3/21/95	4/2/95 + 3/22/95	5/23/95	1/29/96	NA
Discharge Date:	2/9/95	3/22/95	4/13/95	6/5/95	2/15/96	12/21/96
Chit No.:	1140 + Quan.	1315	1365, 1365A + Quan.	1570	2156	NA

Analytes and Methods	Units	Limits*	Not sampled				
pH	pH units	>6 and <9.5	7.6	8.3	7.7	8.2	7.9
Chemical Oxygen Demand	mg/L	--	56	50	24	47	
Cyanide - Total	mg/L	1	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Flash Point	Celsius	≥60	>100	>100	>100	>100	
Fluoride	mg/L	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.1)	ND(1.0)
Phenolics - Total	mg/L	23.0	ND(0.05)	ND(0.05)	ND(0.1)	ND(0.1)	ND(0.05)
Sulfide - Dissolved	mg/L	0.5	ND(0.1)	ND(0.1)	7.5	14	ND(0.10)
Total Suspended Solids	mg/L	--	8	62			110

CCR Title 22 Inorganic Persistent and Bioaccumulative Toxic Substances (Metals)

Asbestos	weight %	--		0.926 ^b	<0.1% wt ^c		
Chromium	mg/L	5	0.13	0.37	0.29	0.81	0.88
Chromium (VI)	mg/L	--	0.061		0.21	0.31	0.41
Copper	mg/L	4.0	0.06	0.093	0.038	0.049	0.070
Fluoride Salts	mg/L	180					
Lead	mg/L	1.5	ND(0.1)	0.24	ND(0.1)	0.10	0.41
Mercury	mg/L	0.05	ND(0.0002)	0.00013	ND(0.0001)	ND(0.0002)	ND(0.0001)
Zinc	mg/L	7.0	0.28	0.54	0.13	0.31	1.1
All other Title 22 metals	mg/L	--	ND	ND	ND	ND	ND

EPA Method 624/8240 - Volatile Organics

Methylene Chloride	ug/L	--	ND	35 ^d	ND		
All other 624/8240 Compounds	ug/L	various	ND	ND	ND		

EPA Method 625 Modified/8270 - Semivolatile Organics

All 625 Modified/8270 Compounds	ug/L	various	ND				ND
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**Table 7. Analytical Data Summary for Water Generated During Removal Activity
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex**

Source:	Discharge Permit #1 60,000 gallons collected rainwater	Discharge Permit #2 60,000 gallons collected rainwater	Discharge Permit #3 100,000 gallons collected rainwater	Discharge Permit #4 40,000 gallons collected rainwater	Discharge Permit #5 20,000 gallons of rainwater collected in containment vault	Containment vault, Pickling Tanks, Rectangular AAST, and Steel Racks Rinse Water (1,000 gallons) Not Sampled*
Sample Date:	1/18/95 + 1/13/95	3/7/95	3/15/95 + 3/16/95	5/16/95	1/18/96	NA
Report Date:	1/31/95 + 1/20/95	3/21/95	4/2/95 + 3/22/95	5/23/95	1/29/96	NA
Discharge Date:	2/9/95	3/22/95	4/13/95	6/5/95	2/15/96	12/21/96
Chit No.:	1140 + Quan.	1315	1365, 1365A + Quan.	1570	2156	NA

Analytes and Methods	Units	Limits*				Not sampled
EPA Method 8080 - Organichlorine Pesticides and Polychlorinated Biphenyls						
All 8080 Compounds	ug/L	various	ND	ND	ND	ND
EPA Method 8120 - Chlorinated Hydrocarbons						
All 8120 Compounds	ug/L	various	ND	ND	ND	ND
EPA Method 8150 - Chlorinated Herbicides						
All 8150 Compounds	ug/L	various	ND	ND	ND	
EPA Method 8280 - Dioxins and Furans						
OCDD	ng/L	--	0.65	ND(1.0)		
All other 8280 Compounds	ug/L	various	ND	ND		
Standard Method (SM) 5520B Modified						

* Most restrictive limit on analyte presented in City and County of San Francisco Department of Public Works batch wastewater discharge requirements (see Appendix F). "--" indicates no limit presented.

^b Units are million chrysotile fibers per liter.

^c Analytical report also indicated a count of 0.66 million fibers per liter for this sample.

^d The laboratory report indicated the following: "624 NOTE: Because methylene chloride is a common lab contaminant, the methylene chloride found in the sample should be considered suspect. All bottles had headspace."

* See McKittrick Waste Treatment Site "Generator's Waste Profile" in Appendix F.

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex

Source:			Concrete core 0 to 3" below surface visibly contaminated block (C1A)	Concrete core 3" to 6" below surface of visibly contaminated block (C2A)	Concrete core 0 to 3" below surface of non- visibly contaminated block (D1A)	Concrete core 3" to 6" below surface of non- visibly contaminated block (D2A)	Sand blasted concrete block, surface sample CS-1	Sand blasted concrete block, surface sample CS-2	Sand blasted concrete block, surface sample CS-3	Sand blasted concrete block, core 1" to 3" below surface, sample C1D-1	Sand blasted concrete block, core 1" to 3" below surface, sample C1D-2
Sample Date:			8/15/95	8/15/95	8/15/95	8/15/95	9/13/95	9/13/95	9/13/95	9/13/95	9/13/95
Report Date:			8/21/95	8/21/95	8/21/95	8/21/95	9/20/95	9/20/95	9/20/95	9/20/95	9/20/95
Chit No.:			1814	1814	1814	1814	1886	1886	1886	1886	1886
Analytes and Methods	Units*	Limits									
* wipe samples are in ug/wipe											
CCR Title 22 Metals - Total (TTL)											
Antimony	mg/Kg	500					NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)
Arsenic	mg/Kg	500					NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)
Asbestos	fibers/g	1.0									
Barium	mg/Kg	10000					180	230	100	180	250
Beryllium	mg/Kg	75					NI(0.5)	NI(0.5)	NI(0.5)	NI(0.5)	0.56
Cadmium	mg/Kg	100					NI(0.5)	NI(0.5)	NI(0.5)	NI(0.5)	NI(0.5)
Chromium	mg/Kg	2500					62	60	120	43	52
Chromium (VI)	mg/Kg	500					3.3	1.3	4.3	0.38	0.95
Cobalt	mg/Kg	8000					7.0	9.5	3.1	11	8.9
Copper	mg/Kg	2500					36	62	17	46	50
Fluoride Salts	mg/Kg	18000									
Lead	mg/Kg	1000					8.0	5.3	15	NI(5.0)	5.8
Mercury	mg/Kg	20					NI(0.2)	0.031	NI(0.02)	0.042	NI(0.02)
Molybdenum	mg/Kg	3500					NI(2.5)	NI(2.5)	NI(2.5)	NI(2.5)	NI(2.5)
Nickel	mg/Kg	2000					37	53	15	50	50
Selenium	mg/Kg	100					NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)	NI(5.0)
Silver	mg/Kg	500					NI(0.5)	NI(0.5)	NI(0.5)	NI(0.5)	NI(0.5)
Thallium	mg/Kg	700					NI(5.0)	5.4	NI(5.0)	NI(5.0)	NI(5.0)
Vanadium	mg/Kg	2400					60	65	15	60	62
Zinc	mg/Kg	5000					99	91	330	61	69
EPA Methods 6010 and 7470 - TCLP Metals											
Barium	mg/L	100.0	0.22	0.23	0.16	0.25	1.3	0.50	0.24	0.50	0.70
Cadmium	mg/L	1.0	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)
Chromium	mg/L	5.0	16	15	12	7.8	0.36	0.46	1.4	0.15	0.33
Lead	mg/L	5.0	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)
Mercury	mg/L	0.2	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)
All other 6010/7470 Compounds	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND
Unreported Methodology											
pH	pH units	>2 and <12.5									
SM 5520E&F Modified											
Total Recoverable Petroleum HCs	mg/Kg										
EPA Methods 8015 Mod/8020 - TPH with BTEX											
Benzene	mg/Kg										
Toluene	mg/Kg										
Ethyl Benzene	mg/Kg										
Xylenes	mg/Kg										
TPPH as Gasoline	mg/Kg										

Table 8. Analytical Data Summary for Solids Sampled During Removal Activity
Construction Summary Report - Pickling and Plate Yard Removal Action
Hunters Point Annex

			Source:	Sand blasted concrete block, core 1" to 3" below surface, sample CD-3	Sand blasted concrete block, core 4" to 4.5" below surface, sample CC-1	Sand blasted concrete block, core 4" to 4.5" below surface, sample CC-2	Sand blasted concrete block, center of block core sample CCC-1	Water blasted steel drying racks 10 wipe samples (peak/average/ standard deviation)	Water blasted steel drying racks wipe sample 1LPS	Water blasted steel drying racks wipe sample 2LPS	Dirt Pile 1 northeastern quadrant 18CY sample S-1	Dirt Pile 2 northeastern quadrant 15CY sample 1A
Sample Date:				9/13/95	9/13/95	9/13/95	9/13/95	8/29/95	9/12/95	9/12/95	1/24/95	4/10/95
Report Date:				9/20/95	9/20/95	9/20/95	9/20/95	8/30/95	9/13/95	9/13/95	2/6/95	4/26/95
Chit No.:				1886	1886	1886	1886	1860	1879	1879	1183	1496
Analytes and Methods												
* wipe samples are in ug/wipe												
CCR Title 22 Metals - Total (TTLC)												
Antimony	mg/Kg	500		ND(5.0)	NI(5.0)	NI(5.0)					80	NI(5.0)
Arsenic	mg/Kg	500		ND(5.0)	NI(5.0)	NI(5.0)					16	NI(5.0)
Asbestos	fibers/g	1.0										
Barium	mg/Kg	10000		220	230	250					210	100
Beryllium	mg/Kg	75		NI(0.5)	NI(5.0)	NI(5.0)					NI(0.5)	NI(0.5)
Cadmium	mg/Kg	100		NI(0.5)	NI(5.0)	NI(5.0)					6.4	3.3
Chromium	mg/Kg	2500		50	66	57		410/57/125	7.2	210	3700	820
Chromium (VI)	mg/Kg	500		0.37	0.60	0.51					0.79	0.69
Cobalt	mg/Kg	8000		8.6	NI(25)	NI(25)					22	9
Copper	mg/Kg	2500		51	45	47					180	220
Fluoride Salts	mg/Kg	18000										
Lead	mg/Kg	1000		5.5	NI(50)	NI(50)		65/8.6/20	12	220	1600	750
Mercury	mg/Kg	20		0.028	NI(0.02)	NI(0.02)					0.11	0.11
Molybdenum	mg/Kg	3500		NI(2.5)	NI(25)	NI(25)					6.6	3.4
Nickel	mg/Kg	2000		52	50	46					200	84
Selenium	mg/Kg	100		7.9	NI(50)	NI(50)					NI(5.0)	NI(5.0)
Silver	mg/Kg	500		NI(0.5)	NI(5.0)	NI(5.0)					NI(0.5)	NI(0.5)
Thallium	mg/Kg	700		5.5	NI(50)	NI(50)					63	NI(5.0)
Vanadium	mg/Kg	2400		58	85	89					27	14
Zinc	mg/Kg	5000		140	91	170		770/125/228	100	580	11000	2700
EPA Methods 6010 and 7470 - TCLP Metals												
Barium	mg/L	100.0		0.84	0.44	0.44	0.53					
Cadmium	mg/L	1.0		NI(0.01)	NI(0.01)	NI(0.01)	NI(0.01)					
Chromium	mg/L	5.0		0.18	0.19	0.055	0.046					
Lead	mg/L	5.0		NI(0.1)	NI(0.1)	NI(0.1)	NI(0.1)					
Mercury	mg/L	0.2		NI(0.0002)	NI(0.0002)	NI(0.0002)	NI(0.0002)					
All other 6010/7470 Compounds	mg/L			ND	ND	ND	ND					
Unreported Methodology												
pH	pH units	>2 and <12.5		12	11	11	12					
SM 5520E&F Modified												
Total Recoverable Petroleum HCs	mg/Kg											
EPA Methods 8015 Mod/8020 - TPH with BTEX												
Benzene	mg/Kg											
Toluene	mg/Kg											
Ethyl Benzene	mg/Kg											
Xylenes	mg/Kg											
TPH as Gasoline	mg/Kg											